William Dawson

THE *Folly and Unreasonableness* OF ATHEISM

Demonstrated from

The Advantage and Pleasure of a Religious Life,
The Faculties of Humane Souls,
The Structure of Animate Bodies, &
The Origin and Frame of the World:

In EIGHT SERMONS

Preached at the Lecture Founded by
The Honourable *ROBERT BOYLE*, Esquire;
In the *First Year*, MDCXCII.

By *RICHARD BENTLEY*, D. D.
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To my moſt Honoured Patrons,
TRUSTEES appointed by the Will of the
Honourable *ROBERT BOYLE*, Eſq;
The Right Reverend Father in God, *THOMAS*,
Lord Biſhop of *Lincoln*,
Sir *Henry Aſhurſt*, K^t and Baronet,
Sir *John Rotheram*, Serjeant at Law,
John Evelyn, ſenior, Eſquire.

Moſt Honoured,

GOD *having diſpoſed the Heart of that incomparable Perſon, the Honourable* Robert Boyle, *Eſquire, lately deceaſed, the Glory of our Nation and Age, whoſe Charity and Goodneſs were as univerſal as his Learning and Fame*; 'To ſettle an Annual Salary for ſome 'Divine or Preaching Miniſter, who ſhall be 'enjoyned to perform the Offices following: '1. To preach Eight Sermons in the Year, for 'proving the Chriſtian Religion againſt notori- 'ous Infidels, viz. *Atheiſts, Deiſts, Pagans, Jews 'and Mahometans*; not deſcending to any Con-

 'troverſies,

'troverſies that are among Chriſtians them-
'ſelves: Theſe Lectures to be on the *Firſt Mon-*
'*day* of the reſpective Months of *January, Fe-*
'*bruary, March, April, May, September, October,*
'*November*; in ſuch Church as the Truſtees
'ſhall from time to time appoint: 2. To be
'aſſiſting to all Companies, and encouraging
'them in any Undertaking for propagating the
'Chriſtian Religion: 3. To be ready to ſatis-
'fie ſuch Real Scruples as any may have con-
'cerning thoſe Matters; and to anſwer ſuch
'New Objections or Difficulties as may be
'ſtarted, to which good Anſwers have not yet
'been made: *You have been pleaſed to believe me able in ſome meaſure to perform theſe Offices, and to command this Firſt Eſſay to be made publick. I am very ſenſible of the great Honour, as well as the great Extent and Difficulty of the Task; and ſhall endeavour to the utmoſt of my poor ability to anſwer the religious and generous Deſign of that Excellent Perſon, and the good Opinion you have entertained of,*

My moſt Honoured Patrons,

Your very obliged and humble Servant,

March 17. 169$\frac{3}{4}$. *R. Bentley.*

THE Folly of Atheism, And (what is now called) DEISM: Even with Respect to The PRESENT LIFE.

The *First* SERMON preached *March* 7. 169½.

Psalm XIV. v. 1.

The Fool hath said in his Heart, There is no God; they are corrupt, they have done abominable works, there is none that doth good.

I Shall not now make any enquiry about the time and occasion and other circumstances of composing this *Psalm*: nor how it comes to pass, that with very little variation we have it twice over, both here the 14th. and again number the 53d. Not that these and such-like are not important considerations in themselves; but that I

think them improper now, when we are to argue and expoſtulate with ſuch perſons, as allow no Divine Authority to our Text; and profeſs no greater, or, it may be they will ſay, leſs Veneration for theſe Sacred Hymns, than for the profane Songs of *Anacreon* or *Horace*. So that although I my ſelf do really believe, that all ſuch as *ſay in their Hearts, There is no God*, are *fooliſh* and *corrupt*, both in Underſtanding and Will; becauſe I ſee infinite Wiſdom it ſelf has pronounced them to be ſo: nevertheleſs this Argument would at preſent have no force upon theſe men, till in due time and method we have evinced the ſufficient Authority of Holy Scripture. But however there are other Books extant, which they muſt needs allow of as proper Evidence; even the mighty Volumes of viſible Nature, and the everlaſting Tables of Right Reaſon; wherein, if they do not wilfully ſhut their Eyes, they may read their own Folly written by the Finger of God, in a much plainer and more ter-
Dan. 5. 5. rible Sentence, than *Belſhazzar*'s was by the Hand upon the Wall.

And as the impious Principles of theſe perſons do preclude any argumentation from the Revealed Word of God: ſo they prevent us alſo from ſpeaking at preſent to the ſecond part of the *Text*. The whole Verſe hath apparently two Propoſitions; the

the one denoting the *Folly* of *Atheiſm*, *The Fool hath ſaid in his Heart, There is no God*: the ſecond declaring the *Corruption* and Flagitiouſneſs of Life which naturally attend it; *They are corrupt, they have done abominable works, there is none that doth good.* Now this latter part to a genuine Atheiſt is meer *Jargon*, as he loves to call it; an empty ſound of words without any ſignification. He allows no Natural Morality, nor any other diſtinction of Good and Evil, Juſt and Unjuſt; than as Human Inſtitution and the Modes and Faſhions of various Countries denominate them. The moſt Heroical Actions or deteſtable Villanies are in the nature of things indifferent to his approbation; if by ſecrecy they are alike conceal'd from Rewards or Puniſhments, from Ignominy or Applauſe. So that till we have proved in its proper place the eternal and eſſential Difference between Virtue and Vice; we muſt forbear to urge Atheiſts with the *Corruption* and *Abominableneſs* of their Principles. But I preſume, the firſt part of the Text, the *Folly and ſottiſhneſs of Atheiſm* (which ſhall be the ſubject of this Diſcourſe) will be allowed to come home to their Caſe: ſince they make ſuch a noiſy pretence to Wit and Sagacity; and I believe ſeveral of them firſt engage in that Labyrinth of Nonſenſe and Folly, out of an abſurd and prepoſterous affectation of ſeeming Wiſer than their Neighbours.

But before I proceed any farther, it will be neceſſary to clear and vindicate this expreſſion of the *Pſalmiſt*, *The Fool hath ſaid in his Heart*, *There is no God.* For I know not any Interpreters, that will allow it to be ſpoken of ſuch, as *flatly deny* the Being of God; but of them, that believing his Exiſtence, do yet ſeclude him from directing the Affairs of the World, from obſerving and judging the Actions of Men. I ſuppoſe they might be induced to this, from the commonly received notion of an Innate Idea of God, imprinted upon every Soul of Man at their Creation, in Characters that can never be defaced. Whence it will follow, that Speculative Atheiſm does only ſubſiſt in *Our* ſpeculation; whereas really Humane Nature cannot be guilty of the crime: that indeed a few ſenſual and voluptuous Perſons may for a ſeaſon eclipſe this native Light of the Soul; but can never ſo wholly ſmother and extinguiſh it, but that at ſome lucid intervals it will recover it ſelf again, and ſhine forth to the conviction of their Conſcience. And therefore they believed, that the words would not admit of a ſtrict and rigorous Interpretation; but ought to be ſo temper'd and accommodated to the nature of things, as that they may deſcribe thoſe profane perſons; who, though they *do not*, *nor can* really doubt *in their Hearts* of the *Being* of God, yet

yet they openly deny his *Providence* in the courſe of their lives. Now if this be all that is meant by the *Text*, I do not ſee how we can defend, not only the fitneſs and propriety, but the very truth of the expreſſion. As to that natural and indeleble ſignature of God, which Human Souls in their firſt Origin are ſuppoſed to be ſtamp'd with, I ſhall ſhew at a fitter opportunity, that it is a miſtake, and that we have no need of it in our Diſputes againſt Atheiſm. So that being free from that prejudice, I interpret the words of the *Text* in the literal acceptation, which will likewiſe take in the Expoſitions of others. For I believe that the Royal Pſalmiſt in this comprehenſive brevity of ſpeech, *There is no God*, hath concluded all the various Forms of Impiety; whether of ſuch as excludes the Deity from governing the World by his Providence, or judging it by his Righteouſneſs, or creating it by his Wiſdom and Power. Becauſe the conſequence and reſult of *all* theſe Opinions is terminated in downright Atheiſm. For the Divine Inſpection into the Affairs of the World doth neceſſarily follow from the Nature and Being of God. And he that denies this, doth implicitly deny his Exiſtence: he may acknowledg what he will with his mouth, but *in his heart he hath ſaid, There is no God. A God, therefore a Providence*; was a general argument of virtuous

tuous men, and not peculiar to the *Stoics* alone. And again, *No Providence, therefore no God*; was the moſt plauſible reaſon, and the moſt frequent in the mouths of Atheiſtical Men. So that it ſeems to be agreed on all hands, that the Exiſtence of God and his Government of the World do mutually ſuppoſe and imply one another.

There are ſome Infidels among us, that not only disbelieve the *Chriſtian* Religion; but oppoſe the aſſertions of *Providence*, of the *Immortality* of the Soul, of an Univerſal *Judgment* to come, and of any *Incorporeal* Eſſence: and yet to avoid the odious name of *Atheiſts*, would ſhelter and skreen themſelves under a new one of *Deiſts*, which is not quite ſo obnoxious. But I think the *Text* hath cut them ſhort, and precluded this ſubterfuge; in as much as it hath declared, that all ſuch wicked Principles are coincident and all one in the iſſue with the rankeſt Atheiſm: *The Fool*, that doth exempt the affairs of the World from the ordination and diſpoſal of God, *hath ſaid in his Heart, There is no God* at all. It was the Opinion of many of the Ancients, that *Epicurus* introduced a *Deity* into his Philoſophy, not becauſe he was perſwaded of his Exiſtence, (for when he had brought him upon the Stage of Nature, he made him only *Muta perſona*, and interdicted him from bearing any Part in it,) but purely that he might

Poſidon. apud Cicer. Plutarch. &c.

might not incurr the offence of the Magiſtrate. He was generally therefore ſuſpected *Verbis reliquiſſe Deum, re ſuſtuliſſe*; to have framed on purpoſe ſuch a contemptible paultry *Hypotheſis* about him, as indeed left the Name and Title of God in the World; but nothing of his Nature and Power. Juſt as a Philoſopher of our own Age gave a ludicrous and fictitious notion about the *Reſt of the Earth*, to evade the hard cenſure and uſage, which *Galileo* had lately met with. For my own part, as I do not exclude this reaſon from being a grand occaſion of *Epicurus*'s owning a God; ſo I believe that He and *Democritus* too were compelled to it likewiſe by the neceſſity of their own Syſtems. For ſeeing they explain'd the Phænomena of *Viſion*, *Imagination*, and *Thought* it ſelf, by certain thin fleeces of Atoms, that flow inceſſantly from the ſurfaces of Bodies, and by their ſubtilty and fineneſs penetrate any obſtacle, and yet retain the exact figures and lineaments of the ſeveral bodies from which they proceed; and in this manner inſinuating themſelves through the pores of Humane Bodies into the Contexture of the Soul, do there excite Senſation and Perception of themſelves: in conſequence of this *Hypotheſis* they were obliged to maintain, that we could have no Fancy, or Idea, or Conception of any thing, but what did really ſubſiſt either intire or in its ſeveral

Mr. *Des Cartes.*

veral parts. Whence it followed, that mankind could have no imaginations of *Jupiter* or *Mars*, of *Minerva* or *Iſis*; if there were not actually ſuch Beings in nature to emit thoſe *Effluvia*, which gliding into the Soul muſt beget ſuch imaginations. And thence it was, that thoſe Philoſophers adapted their deſcription of the Deity to the vulgar apprehenſions of thoſe times; Gods and Goddeſſes innumerable, and all of Humane figure: becauſe otherwiſe the conceptions of mankind about them could not poſſibly be accounted for by their Phyſiology. So that if *Epicurus* and *Democritus* were in earneſt about their Philoſophy, they did neceſſarily and really believe the *Exiſtence of the Gods*. But then as to the nature and authority of them; they bereaved that *Jupiter* of his Thunder and Majeſty: forbidding him to look or peep abroad, ſo much as to enquire what News in the Infinite Space about him; but to content himſelf and be happy with an eternal lazineſs and dozing, unleſs ſome rambling Troops of *Atoms* upon the diſſolution of a neighbouring World might chance to awake him. Now becauſe no *Iſraelite* in the days of the *Pſalmiſt* is likely to have been ſo curious about natural Knowledge, as to believe the Being of God for ſuch a quaint and airy reaſon as this, when he had once boldly denied his Dominion over the World; and ſince there

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is not now one Infidel living, ſo ridiculous as to pretend to ſolve the Phænomena of *Sight*, *Fancy* or *Cogitation* by thoſe fleeting ſuperficial films of Bodies: I muſt beg leave to think, both that the *Fool in the Text* was a thorough confirmed *Atheiſt*; and that the modern diſguiſed *Deiſts* do only call themſelves ſo for the former reaſon of *Epicurus*, to decline the publick *odium*, and reſentment of the Magiſtrate; and that they cover the moſt arrant Atheiſm under the mask and ſhadow of a Deity: by which they underſtand no more, than ſome eternal inanimate Matter, ſome univerſal Nature, and Soul of the World, void of all ſenſe and cogitation, ſo far from being endowed with Infinite Wiſdom and Goodneſs. And therefore in this preſent Diſcourſe they may deſervedly come under that Character which the Text hath given of them, of *Fools that have ſaid in their Hearts, There is no God.*

And now having thus far cleared our way; in the next place we ſhall offer ſome notorious Proofs of the groſs *Folly* and ſtupidity of Atheiſts.

If a Perſon that had a fair Eſtate in reverſion, which in all probability he would ſpeedily be poſſeſs'd of, and of which he might reaſonably promiſe to himſelf a long and happy Enjoyment, ſhould be aſſured by ſome skilfull Phyſician; That

in a very ſhort time he would inevitably fall into a Diſeaſe, which would ſo totally deprive him of his Underſtanding and Memory, that he ſhould loſe the knowledge of all things without him, nay all conſciouſneſs and ſenſe of his own Perſon and Being: If, I ſay, upon a certain belief of this indication, the man ſhould appear overjoyed at the News, and be mightily tranſported with the diſcovery and expectation; would not all that ſaw him be aſtoniſhed at ſuch behaviour? Would they not be forward to conclude, that the Diſtemper had ſeized him already, and even then the miſerable Creature was become a meer *Fool* and an Idiot? Now the Carriage of our *Atheiſts* or *Deiſts* is infinitely more amazing than this; no dotage ſo infatuate, no phrenſie ſo extravagant as theirs. They have been educated in a *Religion*, that inſtructed them in the knowledge of a *Supreme Being*; a Spirit moſt excellently Glorious, ſuperlatively Powerfull and Wiſe and Good, Creator of all things out of nothing; That hath endued the Sons of Men, his peculiar Favorites, with a Rational Spirit, and hath placed them as Spectators in this noble Theatre of the World, to view and applaud theſe glorious Scenes of Earth and Heaven, the workmanſhip of his hands; That hath furniſhed them in general with a ſufficient ſtore of all things, either neceſſary or convenient

convenient for life; and particularly to ſuch as fear and obey him, hath promiſed a ſupply of all wants, a deliverance and protection from all dangers: *That they that ſeek him, ſhall want no manner of thing that is good.* Who beſides his munificence to them in this life; *hath ſo loved the World, That he ſent his Onely-begotten Son,* the expreſs Image of his Subſtance, and Partaker of his eternal Nature and Glory, to *bring Life and Immortality to light,* and to tender them to Mankind upon fair and gracious Terms; That if they ſubmit to his *eaſie yoke, and light burthen,* and obſerve his Commandments *which are not grievous*, he then gives them *the promiſe of eternal Salvation*; he hath *reſerved for them in Heaven an Inheritance incorruptible, and undefiled, and that fadeth not away*; he hath *prepared* for them an unſpeakable, unconceivable Perfection of Joy and Bliſs, *things that eye hath not ſeen, nor ear heard, neither have entred into the heart of man.* What a delightfull and raviſhing *Hypotheſis* of Religion is this? And in this Religion they have had their Education. Now let us ſuppoſe ſome great Profeſſor in Atheiſm to ſuggeſt to ſome of theſe men, That all this is meer dream and impoſture; that there is no ſuch excellent Being, as they ſuppoſe, that created and preſerves them; that all about them is dark ſenſeleſs Matter, driven on by the blind impulſes of Fatality and

Pſal. 34. 9.
Joh. 3. 16.
2 Tim 1. 10.
Matt. 11. 30.
1 Joh. 5. 3.
Heb. 5. 9.
1 Pet. 1. 4.
1 Cor. 2. 9.

Fortune; that Men firſt ſprung up, like Muſhroms, out of the mud and ſlime of the Earth; and that all their Thoughts, and the whole of what they call Soul, are only various Action and Repercuſſion of ſmall particles of Matter, kept a-while a moving by ſome Mechaniſm and Clock-work, which finally muſt ceaſe and periſh by death. If it be true then (as we daily find it is) that men liſten with complacency to theſe horrid Suggeſtions; if they let go their hope of Everlaſting Life with willingneſs and joy; if they entertain the thoughts of final Perdition with exultation and triumph; ought they not to be eſteem'd moſt notorious *Fools*, even deſtitute of common ſenſe, and abandon'd to a callouſneſs and numneſs of Soul?

Ἄδικον καὶ ἄλογον καὶ ἀναίδητον χρῆμα. Max. Tyr. *Diſſ.* 1.

What then, is Heaven it ſelf, with its *pleaſures for evermore*, to be parted with ſo unconcernedly? Is a *Crown of Righteouſneſs*, a *Crown of Life*, to be ſurrendred with laughter? is an *exceeding and eternal weight of Glory* too light in the balance againſt the hopeleſs death of the Atheiſt, and utter extinction? 'Twas a noble ſaying of the Emperor *Marcus*, That he would not endure to live one day in the World, if he did not believe it to be under the government of Providence. Let us but imagin that excellent Perſon confuted and ſatisfied by ſome *Epicurean* of his time; that All was but *Atoms*, and *Vacuum*,

2 Tim. 4. 8. Jam. 1. 12.

2 Cor. 4. 17.

Vacuum, and *Neceſſity*, and *Chance*. Would He have been ſo pleaſed and delighted with the conviction? would he have ſo triumph'd in being overcome? or rather, as he hath told us, would he not have gone down with ſorrow and deſpair to the Grave? Did I but once ſee an Atheiſt lament and bewail himſelf; That upon a ſtrict and impartial examination he had found to his coſt, that all was a miſtake; that the Prerogative of Humane Nature was vaniſhed and gone; thoſe glorious hopes of Immortality and Bliſs, nothing but cheating Joys and pleaſant Deluſions; that he had undone himſelf by loſing the comfortable Error, and would give all the World to have better arguments for Religion: there would be great hopes of prevailing upon ſuch an Atheiſt as this. But, alas! there are none of them of this temper of mind; there are none that *underſtand and ſeek after God*; they have *no knowledge*, nor any deſire of it; they *thruſt the Word of God from them, and judge themſelves unworthy of everlaſting life*; they willingly prefer Darkneſs before Light; and obſtinately chooſe to periſh for ever in the Grave, rather than be Heirs of Salvation in the Reſurrection of the Juſt. Theſe certainly are the *Fools* in the Text, indocil intractable Fools, whoſe ſtolidity can baffle all Arguments, and be proof againſt Demonſtration it ſelf; *whoſe*

v. 2. of this Pſalm. ver. 4. Act. 13. 46.

eyes

Phil. 3.19. *end* (as the words of St. *Paul* do truly deſcribe them) *whoſe end* and very Hope *is deſtruction*, an eternal Deprivation of Being; *whoſe God is their belly*, the gratification of ſenſual Luſts; *whoſe Glory is in their ſhame*, in the debaſing of Mankind to the condition of Beaſts; *who mind earthly things*, who if 2Cor.12.2. (like that great Apoſtle) they were *caught up to the* Num. 13. 32. *third Heaven*, would (as the Spyes did of *Canaan*) *bring down an evil report* of thoſe Regions of Bliſs. And I fear, unleſs it pleaſe God by extraordinary Mar. 9.24. methods *to help their unbelief, and enlighten the eyes of* Eph. 1.19. *their underſtanding*; they will carry their Atheiſm with them to the Pit; and the flames of Hell only muſt convince them of their Error.

This ſupine and inconſiderate behaviour of the Atheiſts is ſo extremely abſurd, that it would be deem'd incredible, if it did not occurr to our daily Obſervation; it proclaims aloud, that they are not led aſtray by their Reaſoning, but led captive by their Luſts to the denial of God. When the very pleaſures of Paradiſe are contemn'd and trampled on, like Pearls caſt before Swine; there's ſmall hope of reclaiming them by arguments of Reaſon. But however, as *Solomon* adviſeth, we will anſwer Prov. 26. 4. theſe *Fools not according to their Folly, leſt we alſo be like unto them.* It is expedient that we *put to ſilence the ignorance of theſe fooliſh men*, that Believers may be

be the more confirmed and more reſolute in the Faith.

Did Religion beſtow Heaven without any terms or conditions indifferently upon all; if the *Crown of Life* was hereditary, and free to Good and Bad; and not ſettled by Covenant upon the Elect of God only, ſuch as *live ſoberly and righteouſly and godly in this preſent world*: I believe there would be no ſuch thing as an Infidel among us. And without controverſie 'tis the Way and Means of attaining to Heaven, that makes profane Scorners ſo willingly let go the Expectation of it. 'Tis not the Articles of the Creed, but the Duty to God and their Neighbour, that is ſuch an inconſiſtent incredible Legend. They will not practiſe the Rules of Religion, and therefore they cannot believe the Promiſes and Rewards of it. Tit. 2. 12.

But however, let us ſuppoſe them to have acted like rational and ſerious Men: and perhaps upon a diligent inquiſition they have found, that the Hope of Immortality deſerves to be *joyfully* quitted, and that either out of *Intereſt*, or *Neceſſity*.

I. And firſt, One may conceive indeed, how there might poſſibly be a *neceſſity* of quitting it. It might be tied to ſuch Terms, as would render it impoſſible ever to be obtain'd. For example, if it ſhould be required of all the Candidates of Glory and

and Immortality, to give a full and knowing Aſſent to ſuch things as are repugnant to Common Senſe, as contradict the κοιναὶ ἔννοιαι, the univerſal Notions and indubitable Maxims of Reaſon; if they were to believe, that One and the ſame Thing may *be* and *not be* at the ſame time and in the ſame reſpect; If allowing the received Idea's and denominations of Numbers and Figures and Body, they muſt ſeriouſly affirm, that Two and two do make a Dozen, or that the Diameter of a Circle is as long as the Circumference, or that *the ſame Body may be all of it in diſtant places at once.* I muſt confeſs that the offers of Happineſs upon ſuch Articles of Belief as theſe, would be meer tantalizing of Rational Creatures; and the Kingdom of Heaven would become the Inheritance of only Idiots and Fools. For whilſt a man of Common Capacity doth think and reflect upon ſuch Propoſitions; he cannot poſſibly bribe his Underſtanding to give a Verdict for their Truth. So that he would be quite fruſtrated of the Hope of Reward, upon ſuch unpracticable Conditions as theſe: neither could he have any evidence of the Reality of the Promiſe, ſuperiour to what he is conſcious to of the Falſity of the Means. Now if any Atheiſt can ſhew me in the Syſtem of Chriſtian Religion any ſuch abſurdities and repugnancies to our natural Faculties; I will

will either evince them to be Interpolations and Corruptions of the Faith, or yield my ſelf a Captive and a Proſelyte to his Infidelity.

II. Or, 2dly, they may think 'tis the *Intereſt* of Mankind, that there ſhould be no Heaven at all; becauſe the Labour to acquire it is more worth than the Purchaſe: God Almighty (if there be one) having much overvalued the Bleſſings of his Preſence. So that upon a fair eſtimation, 'tis a greater advantage to take one's ſwing in Senſuality, and have a glut of Voluptuouſneſs in this Life, freely reſigning all pretences to future Happineſs; which, when a man is once extinguiſh'd by Death, he cannot be ſuppoſed either to want or deſire: than to be tied up by Commandments and Rules ſo contrary to Fleſh and Blood; to *take up one's Croſs, to deny himſelf*, and refuſe the Satisfaction of Natural Deſires. This indeed is the true Language of Atheiſm, and the Cauſe of it too. Were not this at the Bottom, no man in his wits could contemn and ridicule the expectation of Immortality. Now what power or influence can Religion have upon the minds of theſe men; while not only their Affections and Luſts, but their ſuppoſed Intereſt ſhall plead againſt it? But if we can once ſilence this powerfull Advocate, we ſhall without much difficulty carry the Cauſe at the Bar of impartial Reaſon. Mark. 8. 34.

Now here is a notorious instance of the *Folly* of Atheists, that while they repudiate all Title to the Kingdom of Heaven, meerly for the present Pleasure of Body, and their boasted Tranquillity of Mind; besides the extreme madness in running such a desperate Hazard after Death, (which I will not now treat of) they deprive themselves here of that very Pleasure and Tranquillity they seek for. For I shall now endeavour to shew, That Religion it self gives us the greatest Delights and Advantages even in this life also, though there should prove in the event to be no Resurrection to another. *Her ways are ways of pleasantness, and all her paths are peace.*

Prov. 3. 17.

But before I begin that, I must occurr to one specious Objection both against this Proposition and the past part of my Discourse; Namely, that Religion doth perpetually haunt and disquiet us with dismal apprehensions of everlasting Burnings in Hell; and that there is no shelter or refuge from those Fears, but behind the Principles of Atheism.

(1.) First therefore I will freely acknowledge to the Atheists; that some part of what hath been said is not directly conclusive against them; if they say, that before they revolted from the Faith, they had sinned away all expectation of ever arriving at Heaven: and consequently had good reason so *joy-*

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fully to receive the news of Annihilation by Death, as an advantageous change for the everlaſting torments of the Damn'd. But becauſe I cannot expect, that they will make ſuch a ſhameleſs and ſenſeleſs Confeſſion, and ſupply us with that invincible argument againſt themſelves: I muſt ſay again, that to prefer final Extinction before a happy Immortality does declare the moſt deplorable ſtupidity of mind. Nay although they ſhould confeſs, that they believed themſelves to be Reprobates, before they disbelieved Religion; and took Atheiſm as a ſanctuary and Refuge from the Terrors of Hell: yet ſtill the imputation of *Folly* will ſtick upon them: in as much as they choſe Atheiſm as an Opiate to ſtill thoſe frightning Apprehenſions, by inducing a dulneſs and lethargy of mind; rather than they would make uſe of that active and ſalutary medicine, a hearty Repentance; that they did not know the *Riches of the goodneſs and forbearance and long-ſuffering of God*, and that a ſincere Amendment of Life was never too late nor in vain; *Jeſus Chriſt being the Saviour of all men*, and a *propitiation for the ſins of the whole world*; *who came into the world to ſave ſinners, even the chief of them all*; *and died for the ungodly, and his bittereſt enemies.* Rom. 2. 4. 1 Tim. 4. 10. 1 Joh. 5. 14. 1 Tim. 1. 15. Rom. 5. 6, 10.

(2.) And ſecondly, As to the *Fears of Damnation*; thoſe terrors are not to be charged upon Religion it

ſelf, which proceed either from the Want of Religion, or Superſtitious miſtakes about it. For as an honeſt and innocent Man doth know the puniſhments, which the Laws of his Country denounce againſt Felons and Murtherers and Traytors, without being terrified or concern'd at them: So a Chriſtian in truth as well as in name, though he believe the conſuming Vengeance prepared for the diſobedient and unbelievers, is not at all diſmayed at the apprehenſions of it. Indeed it adds ſpurs, and gives wings to his diligence,
Phil. 2. 12. it excites him to *work out his Salvation with fear and trembling*; a religious and ingenuous fear, that is temper'd with hope and with love and unſpeakable joy. But he knows, that if he fears him who is *able*
Matt. 10. 28. *to deſtroy both ſoul and body in Hell*, he needs not fear that his own ſoul or body ſhall ever go thither.

I allow that ſome debauched and profligate Wretches, or ſome deſigning perfidious Hypocrites, that are religious in outward profeſſion, but *corrupt and abominable* in their works, are moſt juſtly as well as uſually liable to theſe horrours of mind. 'Tis not my buſineſs to defend or excuſe ſuch as theſe; I muſt leave them, as long as they keep their *hardneſs and impenitent Hearts*, to thoſe gnawing and excruciating Fears, thoſe whips of the Divine *Nemeſis*, that frequently ſcourge even Atheiſts themſelves. For the Atheiſts alſo can never wholly extinguiſh

thoſe

thoſe horrible forebodings of Conſcience. They endeavour indeed to compoſe and charm their Fears, but a thouſand occaſions daily awaken the ſleeping Tormenters. Any ſlight Conſideration either of themſelves, or of any thing without; whatſoever they think on, or whatſoever they look on; all adminiſter ſome reaſons for ſuſpicion and diffidence, leſt poſſibly they may be in the wrong; and then 'tis a *fearfull thing to fall into the hands of the living God*: *There are they in great fear*, as 'tis in the 5th verſe of this *Pſalm*, under terrible preſages of *judgment and fiery indignation*. Neither can they ſay, That theſe Terrors, like Tales about Spectres, may diſturb ſome ſmall Pretenders and puny Novices, but dare not approach the *vere Adepti*, the Maſters and Rabbies of Atheiſm. For 'tis well known both from ancient and modern Experience, that the very boldeſt of them, out of their Debauches and Company, when they chance to be ſurprized with Solitude or Sickneſs, are the moſt ſuſpicious and timorous and deſpondent Wretches in the World: and that the boaſted Happy Atheiſt in the Indolence of body, and an undiſturbed Calm and Serenity of mind, is altogether as rare a Creature, as the *Vir Sapiens* was among the *Stoicks*; whom they often met with in Idea and Deſcription, in Harangues and in Books, but freely

Heb. 10. 31.

Heb. 10. 27.

Cic. Plutarch, &c.

ly own'd that he never had or was like to exiſt actually in Nature.

And now as to the preſent advantages which we owe to *Religion*, they are very conſpicuous; whether we conſider Mankind, (1.) *Separately*, or (2.) under *Society* and *Government*.

1. And firſt, in a *Single Capacity*. How is a good Chriſtian animated and cheer'd by a ſtedfaſt belief of the Promiſes of the Goſpel; of an everlaſting enjoyment of perfect Felicity, ſuch as after millions of millions of Ages is ſtill youthfull and flouriſhing and inviting as at the firſt? no wrinkles in the face, no gray hairs on the head of Eternity; no end, no diminution, no fatiety of thoſe delights. What a warm and vigorous influence does a Religious Heart feel from a firm expectation of theſe Glories? Certainly this Hope alone is of ineſtimable value; 'tis a kind of anticipation and pledge of thoſe Joys; and at leaſt gives him one Heaven upon Earth, though the other ſhould prove a Deluſion. Now what are the mighty Promiſes of Atheiſm in competition with theſe? let us know the glorious Recompences it propoſes: Utter Extinction and Ceſſation of Being; to be reduced to the ſame condition, as if we never had been born. O diſmal reward of Infidelity! at which Nature does ſhrink and ſhiver with horror. What ſome of the

* Learned-

* Learnedeſt Doctors among the *Jews* have eſteem'd the moſt dreadfull of all Puniſhment, and have aſſigned for the portion of the blackeſt Criminals of the Damn'd; ſo interpreting *Tophet*, *Abaddon*, *the Vale of Slaughter* and the like, for final Exciſion and Deprivation of Being: this Atheiſm exhibits to us, as an Equivalent to Heaven. 'Tis well known, what hath been diſputed among Schoolmen to this effect. And 'tis an obſervation of *Plutarch*, that the Generality of Mankind, πάντες ἢ πᾶσαι, as well Women as Men, choſe rather to endure all the Puniſhments of Hell, as deſcribed by the Poets; than part with the Hope of Immortality, though immortal only in miſery. I eaſily grant, that this would be a very hard Bargain; and that *Not to be at all*, is more eligible, than *to be miſerable always*: our Saviour himſelf having determin'd the queſtion; *Wo to that man, by whom the Son of Man is betrayed; good were it for that man, if he had never been born.* But however thus much it evidently ſhews, That this deſire of Immortality is a natural Affection of the Soul; 'tis *Self-preſervation* in the higheſt and trueſt meaning; 'tis interwoven in the very Frame and Conſtitution of Man. How then can the Atheiſt reflect on his own *Hypotheſis* without extreme ſorrow and dejection of Spirit? Will he ſay, that when once he is dead, this Deſire will be nothing; and

* *Vide* Pocockii *Notas ad Portam* Moſis, *p.* 158, *&c.*

Plutarch. Ὅτι οὐδὲ ζῆν, &c. *p.* 1104, 1105. *Ed.* Ruald.

Mat. 14. 21.

and that He that *is* not, cannot lament his Annihilation? So indeed it would be hereafter, according to his Principles. But nevertheleſs, for the preſent, while he continues in Life (which we now ſpeak of) that dusky Scene of Horror, that melancholy Proſpect of final Perdition will frequently occur to his Fancy; the ſweeteſt Enjoyments of Life will often become flat and inſipid, will be damp'd and extinguiſh'd, be bitter'd and poiſon'd by the malignant and venomous quality of this Opinion.

Is it not more comfortable to a man, to think well of himſelf, to have a high Value and Conceit of the Dignity of his Nature, to believe a noble Origination of his Race, the Off-ſpring and Image of the great King of Glory: rather than that men firſt proceeded, as Vermin are thought to do, by the ſole influence of the Sun out of Dirt and Putrefaction?

Is it not a firmer foundation for Contentment and Tranquillity, to believe that All things were at firſt created, and are ſince continually order'd and diſpos'd for the beſt, and that principally for the Benefit and Pleaſure of Man: than that the whole Univerſe is meer bungling and blundring; no Art or Contrivance to be ſeen in't; nothing effected for any purpoſe and deſign; but all ill-favouredly cobled and jumbled together by the unguided agitation and rude ſhuffles of Matter? Can

Can any man wiſh a better Support under affliction, than the Friendſhip and Favour of Omnipotence, of Infinite Wiſdom and Goodneſs; that is both able, and willing and knows how to relieve him? Such a man *can do all things through Chriſt that ſtrengtheneth him*, he can patiently ſuffer all things with cheerfull ſubmiſſion and reſignation to the Divine Will. He has a ſecret Spring of ſpiritual Joy, and the continual Feaſt of a good Conſcience within, that forbid him to be miſerable. But what a forlorn deſtitute Creature is the Atheiſt in Diſtreſs? He hath no friend in Extremity, but Poiſon or a Dagger or a Halter or a Precipice. A violent Death is the laſt refuge of the *Epicureans*, as well as the *Stoicks*. This, ſays *Lucretius*, is the diſtinguiſhing Character of a genuine Son of our Sect, that he will not endure to live in Exile and Want and Diſgrace out of a vain fear of Death; but diſpatch himſelf reſolutely into the State of eternal Sleep and Inſenſibility. And yet for all this ſwaggering, not one of a hundred of them hath boldneſs enough to follow the Direction. The baſe and degenerous Saying of one of them is very well known; * That *Life* is always *ſweet*, and he ſhould ſtill deſire to prolong it; though, after he had been maim'd and diſtorted by the Rack, he ſhould laſtly be condemn'd to hang on a Gibbet.

Phil. 4. 13.

Lib. 3.

* Mecænas *apud* Senec. *Ep.* 101. *Debilem facito Manu; debilem pede, coxa: &c.*

And then, as to the *Practical Rules* and Duties of Religion: as the Miracles of our Lord are peculiarly eminent above the *Lying Wonders* of *Dæmons*, in that they were not made out of vain Oſtentation of Power, and to raiſe unprofitable Amazement; but for the real Benefit and Advantage of men, by feeding the Hungry, healing all ſorts of Diſeaſes, ejecting of Devils, and reviving the Dead: ſo likewiſe the Commands which he hath impoſed on his Followers are not like the abſurd Ceremonies of *Pagan* Idolatry, the frivolous Rites of their Initiations and Worſhip, that might look like Incantation and Magick, but had no tendency in their Nature to make Mankind the happier. Our Saviour hath enjoyn'd
Rom. 12.1. us a *Reaſonable ſervice*; accommodated to the rational part of our nature. All his Laws are in themſelves, abſtracted from any Conſideration of Recompence, conducing to the Temporal Intereſt of them that obſerve them. For what can be more availing to a mans Health, or his Credit, or Eſtate, or Security in this World, than Charity and Meekneſs, than Sobriety and Temperance, than Honeſty and Diligence in his Calling? Do not Pride and Arrogance infallibly meet with Contempt? Do not Contentiouſneſs and Cruelty and Study of Revenge ſeldom fail of Retaliation? Are not envious and covetous, diſcontented and anxious minds tormen-

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ters to themſelves? Do not we ſee, that ſlothfull and intemperate and incontinent perſons deſtroy their Bodies with diſeaſes, their Reputations with diſgrace, and their Families with want? Are Adultery and Fornication forbidden only by *Moſes* and *Chriſt*? or do not *Heathen* Law-givers puniſh ſuch Enormities with Fines, or Impriſonment, with Exile or Death? 'Twas an Objection of *Julian* the Apoſtate; that there were no new Precepts of Morality in our Religion: *Thou ſhalt not kill, Thou ſhalt not ſteal, Thou ſhalt not covet thy neighbours wife.* Why all the World, ſays he, is agreed about theſe Commandments: and in every Country under Heaven, there are Laws and Penalties made to enforce all the Ten, excepting only the *Sabbath* and *the Worſhip of ſtrange Gods.* We can anſwer Him another way; but he may make our Infidels aſhamed to complain of thoſe Ordinances as hard Impoſitions, which the ſenſe of all Nations has thought to be reaſonable: which not only the Philoſophers of *Greece* and *Italy* and the ancient World; but the Banians of *Mogul*, the Talapoins of *Siam*, the Mandarins of *China*, the Moraliſts of *Peru* and *Mexico*, all the Wiſdom of Mankind have declared to be neceſſary Duties. Nay if the Atheiſts would but live up to the Ethics of *Epicurus* himſelf, they would make few or no Proſelytes from the Chri-

Julianus apud Cyrillum, p. 134.

ſtian Religion. For none revolt from the Faith for ſuch things as are thought peculiar to Chriſtianity; Not becauſe they muſt *love and pray for their* Matt. 5. 44. *enemies*, but becauſe they muſt not poiſon or ſtab them: not becauſe they muſt not *look upon a Woman* ver. 28. *to luſt after her*, but becauſe they are much more reſtrain'd from committing the Act. If wanton glances and laſcivious thoughts had been permitted by the Goſpel, and only the groſs Act forbidden; they would have apoſtatized nevertheleſs. This we may conjecture from what *Plato* and others have told us, that it was commonly ἀκρασίαν ἡδονῶν καὶ ὀπιθυμιῶν, immoderate Affections and Luſts, that in the very times of Paganiſm induced men to be Atheiſts. It ſeems their impure and brutal Senſuality was too much confined by the Religion of *thoſe* Countries, where even *Venus* and *Bacchus* had their Temples. Let not therefore voluptuous Atheiſts lay all the fault of their Sins upon the Infirmity of Humane Nature; nor plead that Fleſh and Blood cannot reſiſt thoſe Temptations, which have all their force and prevalence from long Cuſtom and inveterated Habit. What enticement, what pleaſure is there in common profane Swearing? yet neither the fear of God nor of the Law will perſuade men to leave it. 'Tis prevailing Example that hath now made it faſhionable, but it hath not al-

Plato *de Legib. lib.* 10. *p.* 886. *Ed.* Steph.

ways

ways been ſo, nor will be hereafter. So other Epidemical Vices, they are rife and predominant only for a ſeaſon, and muſt not be aſcribed to Humane Nature in the Lump. In ſome Countries Intemperance is a neceſſary part of Converſation; in others Sobriety is a Vertue univerſal, without any reſpect to the Duties of Religion. Nor can they ſay, that this is only the difference of Climate, that inclines one Nation to Concupiſcence and Senſual Pleaſures; another to Blood-thirſtineſs and Deſire of Revenge. It would diſcover great ignorance in Hiſtory, not to know that in all Climates a whole People has been over-run with ſome recently invented or newly imported kind of Vice, which their Grandfathers never knew. In the lateſt Accounts of the Country of *Guiana*, we are told that the eating of Humane Fleſh is the beloved pleaſure of thoſe Savages: two Nations of them by mutual devouring are reduced to two handfulls of men. When the Goſpel of our Saviour was preached to them, they received it with gladneſs of heart; they could be brought to forgo Plurality of Wives; though that be the main impediment to the converſion of the *Eaſt Indies*. But the great Stumbling-block with theſe *Americans*, and the only Rock of Offence was the forbidding them *to eat their Enemies*: That irreſiſtible Temptation made them quickly

quickly to revolt and relapſe into their Infidelity. What muſt we impute this to? to the temperature of the Air, to the nature of the Soil, to the influence of the Stars? Are theſe *Barbarians* of man-eating Conſtitutions, that they ſo hanker after this inhumane Diet, which We cannot imagin without horror? Is not the ſame thing practiſed in other parts of that Continent? Was it not ſo in *Europe* of old, and is it not now ſo in *Africa*? If an Eleventh Commandment had been given, *Thou ſhalt not eat Humane Fleſh*; would not theſe Canibals have eſteem'd it more difficult than all the Ten? And would not they have really had as much reaſon as our Atheiſts, to plead the power of the Temptation, and the propenſity of Fleſh and Blood? How impudent then are the Atheiſts, that traduce the eaſie and gracious Conditions of the Goſpel, as Unreaſonable and Tyrannical Impoſitions? *Are not God's ways equal*, O ye Children of Deſtruction, *and are not your ways unequal?*

II. Secondly and laſtly, For the good Influence of Religion upon *Communities* and Governments, *habemus confitentes reos*; 'tis ſo apparent and unqueſtionable, that 'tis one of the Objections of the Atheiſt, That it was firſt contrived and introduced by Politicians, to bring the wild and ſtraggling Herds of Mankind under Subjection and Laws.

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Out of thy own mouth ſhalt thou be judged, thou wicked ſervant. Thou ſay'ſt that the wiſe Inſtitutors of Government, Souls elevated above the ordinary pitch of men, thought Religion neceſſary to Civil Obedience. Why then doſt thou endeavour to undermine this Foundation, to undo this Cement of Society, and to reduce all once again to thy imaginary State of Nature, and Original Confuſion? No Community ever was or can be begun or maintain'd, but upon the Baſis of Religion. What Government can be imagin'd without Judicial Proceedings? and what methods of Judicature without a Religious Oath? which implies and ſuppoſes an Omniſcient Being, as conſcious to its falſhood or truth, and a revenger of Perjury. So that the very nature of an Oath (and therefore of Society alſo) is ſubverted by the Atheiſt; who profeſſeth to acknowledge nothing ſuperiour to himſelf, no omnipreſent obſerver of the actions of men. For an * Atheiſt to compoſe a *Syſtem* of *Politicks* is as abſurd and ridiculous, as *Epicurus*'s Sermons were about † *Sanctity* and *Religious Worſhip*. But there was hope, that the Doctrine of abſolute uncontroulable Power and the formidable name of *Leviathan* might flatter and bribe the Government into a *toleration of Infidelity*. We need have no recourſe to notion and ſuppoſition; we have ſad experience and convincing

Luke 19. 22.

* Hobbes *de Cive, Leviathan.*

† Περὶ Ὁσιότητος, Laert. *De ſanctitate & de pietate adverſus Deos.* Cic.

convincing example before us, what a rare Conſtitution of Government may be had in a whole Nation of Atheiſts. The Natives of *Newfoundland* and *New France* in *America*, as they are *ſaid* to live without any ſenſe of Religion, ſo they are *known* to be deſtitute of its advantages and bleſſings; without any Law or form of Community; without any Literature or Sciences or Arts; no Towns, no fixed Habitations, no Agriculture, no Navigation. And 'tis entirely owing to the power of Religion, that the whole World is not at this time as barbarous as they. And yet I ought not to have called theſe miſerable Wretches *a Nation of Atheiſts*. They cannot be ſaid to be of the Atheiſt's opinion; becauſe they have no opinion at all in the matter: They do not ſay in their hearts, *There is no God*; for they never once deliberated, if there was one or no. They no more *deny* the Exiſtence of a Deity; than they deny the *Antipodes*, the *Copernican Syſtem*, or the *Satellites Jovis*: about which they have had no notion or conception at all. 'Tis the *Ignorance* of thoſe poor Creatures, and not their *Impiety*: *their* Ignorance as much to be pitied, as the Impiety of the *Atheiſts* to be deteſted and puniſh'd. 'Tis of mighty importance to the Government to put ſome timely ſtop to the ſpreading Contagion of this *Peſtilence that walketh by day*, that dares to diſperſe its curſed ſeeds

De Laert. *p.* 34, 47, 50. *Voyage du Sieur de Champlain. p.* 28. & 93.

ſeeds and principles in the face of the Sun. The *Fool* in the Text had only ſaid *in his heart, There is no God*: he had not ſpoken it aloud, nor openly blaſphem'd, in places of publick reſort. There's too much reaſon to fear, that ſome of all orders of men, even Magiſtracy it ſelf, have taken the Infection: a thing of dreadfull conſequence and moſt imminent danger. *Epicurus* was ſomewhat wiſer than ordinary, when he ſo earneſtly adviſed his Diſciples againſt medling in publick affairs: He knew the nature and tendency of his own Philoſophy; that it would ſoon become ſuſpected and odious to a Government, if ever Atheiſts were employ'd in places of Truſt. But becauſe he had made one great Rule ſuperior to all, *That every man's only Good was pleaſure of Body and contentment of Mind*: hence it was that men of ambitious and turbulent Spirits, that were diſſatisfied and uneaſie with Privacy and Retirement, were allowed by his own Principle to engage in matters of State. And there they generally met with that fortune, which their Maſter foreſaw. Several Cities of *Greece* that had made experiment of them in Publick Concerns, drove them out, as Incendiaries and Peſts of Commonweals, by ſevere Edicts and Proclamations. Atheiſm is by no means tolerable in the moſt private condition: but if it aſpire to authority and power;

Plutarch. Λανθάνων βιώσας. Lucret. &c.

Plutarch. Ὅτι κἀν ἡδέως ζῆν. Cicero, Athenæus, Ælian, &c.

if it acquire the Command of an Army or a Navy; if it get upon the Bench or into the Senate, or on a Throne: What then can be expected, but the baſeſt Cowardice and Treachery, but the fouleſt prevarication in Juſtice, but betraying and ſelling the Rights and Liberties of a People, but arbitrary Government and tyrannical Oppreſſion? Nay if Atheiſm were once, as I may ſay, the National Religion: it would make its own Followers the moſt miſerable of men; it would be the Kingdom of Satan divided againſt it ſelf; and the Land would be ſoon brought to deſolation. *Joſephus*, that knew them, hath inform'd us, that the Sadduces, thoſe Epicureans among the Jews, were not only rough and cruel to men of a different Sect from their own; but perfidious and inhumane one towards another. This is the genuine ſpirit and the natural product of Atheiſm. No man, that adheres to that narrow and ſelfiſh Principle, can ever be Juſt or Generous or Gratefull; * unleſs he be ſometime overcome by Good-nature and a happy Conſtitution. No Atheiſt, as ſuch, can be a true Friend, an affectionate Relation, or a loyal Subject. The appearance and ſhew of mutual Amity among them, is wholly owing to the ſmallneſs of their number, and to the obligations of a Faction. 'Tis like the Friendſhip of Pickpockets and Highwaymen, that

Joſephus *de Bello Judaico, l. 2. c. 12.*

* *Si ſibi ipſe conſentiat, & non interdum naturæ bonitate vincatur.* Cic. *de Offic. 1. 2.*

are

are ſaid to obſerve ſtrict Juſtice among themſelves, and never to defraud a Comrade of his ſhare of the Booty. But if we could imagine a whole Nation to be Cut-purſes and Robbers; would there then be kept that ſquare-dealing and equity in ſuch a monſtrous *den of Thieves*? And if Atheiſm ſhould be ſuppoſed to become univerſal in this Nation (which ſeems to be deſign'd and endeavour'd, though we know the gates of Hell ſhall not be able to prevail) farewell all Ties of Friendſhip and Principles of Honour; all Love for our Country and Loyalty to our Prince; nay, farewell all Government and Society it ſelf, all Profeſſions and Arts, and Conveniencies of Life, all that is laudable or valuable in the World.

May the Father of Mercies and God of Infinite Wiſedom reduce the Fooliſh *from their Errors, and make them* wiſe unto Salvation; *Confirm the Sceptical and wavering Minds, and ſo prevent Us, that ſtand faſt, in all our doings, and further us with his continual help,* that we may not be of them that draw back unto Perdition, but of them that believe to the ſaving of the Soul. *Amen.*

Matter and Motion cannot think:

OR, A

CONFUTATION

OF

ATHEISM

From the

Faculties of the Soul.

The *Second* SERMON preached *April* 4. 1692.

Acts XVII. 27.

That they ſhould ſeek the Lord, if happily they might feel after him, and find him; though he be not far from every one of us: for in him we Live, and Move, and have our Being.

THeſe words are a part of that Diſcourſe which St. *Paul* had at *Athens*. He had not been long in that inquiſitive and pragmati-
Acts 17. 18. cal City, but we find him *encountered by the Epicureans and Stoicks*, two ſorts of people that were very ill

ill qualified for the Chriſtian Faith: the one by reaſon of their Carnal Affections, either believing no God at all, or that he was like unto themſelves, diſſolv'd in * Lazineſs and Eaſe; the other out of Spiritual Pride preſuming to aſſert, that † a Wiſe Man of their Sect was equal, and in ſome caſes ſuperior to the Majeſty of God himſelf. Theſe men *corrupted through Philoſophy and vain deceit, took our Apoſtle, and carried him unto Areopagus*, (a place in the City, whither was the greateſt reſort of Travellers and Strangers, of the graveſt Citizens and Magiſtrates, of their Orators and Philoſophers;) to give an account of himſelf and the new Doctrine that he ſpoke of. *For*, ſay they, *thou bringeſt ſtrange things to our ears; we would know therefore what theſe things mean.* The Apoſtle, who was to ſpeak to ſuch a promiſcuous Aſſembly, has with moſt admirable Prudence and Art, ſo accommodated his Diſcourſe, that every branch and member of it is directly oppoſed to a known Error and Prejudice of ſome Party of his Hearers. I will beg leave to be the more prolix in explaining the whole; becauſe it will be a ground and introduction not only to this preſent, but ſome other ſubſequent Diſcourſes.

* Ἀεργὸν καὶ ἀμελές.

† *Arriani Epictet.* l. 1. c. 12. Ὡς κατάγε τὸν λόγον, οὐδὲ χείρων τῶν θεῶν, οὐδὲ μικρότερος. Seneca *Ep.* 53. *Eſt aliquid quo ſapiens antecedat Deum: ille naturæ beneficio, non ſuo ſapiens eſt.*

v. 19.

v. 20.

From

From the Inſcription of an Altar to the Unknown God, which is mentioned by Heathen Authors, *Lucian*, *Philoſtratus*, and others, he takes occaſion (v. 24.) to declare unto them, *that God that made the World and all things therein.* This firſt Doctrine, though admitted by many of his Auditors, is directly both againſt *Epicureans*, that aſcribed the Origin and Frame of the World not to the Power of God, but the fortuitous concourſe of Atoms; and *Peripatetics*, that ſuppoſed all things to have been eternally, as they now are, and never to have been made at all, either *by* the Deity or *without* him. Which God, ſays he, *ſeeing that he is Lord of Heaven and Earth, dwelleth not in Temples made with hands, neither is worſhipped with men's hands as though he needed any thing, ſeeing he giveth to all Life and Breath and all things.* This is oppoſed to the Civil and Vulgar Religion of *Athens*, which furniſh'd and ſerv'd the Deity with Temples and Sacrifices, as if he had really needed Habitation and Suſtenance. And that the common Heathens had ſuch mean apprehenſions about the Indigency of their Gods, it appears plainly, to name no more, from *Ariſtophanes's Plutus*, and the Dialogues of *Lucian*. But the Philoſophers were not concern'd in this point; all Parties and Sects, even the * *Epicureans* themſelves, did maintain (τὸ αὐτάρκες) the ſelf-ſufficiency of the Godhead:

Lucianus *in* Philopat. Philoſtrat. *de vita* Apol. *l.* 6. *c.* 2. Pauſan. *in* Eliacis.

v. 25.

* Lucret. 2. *Ipſa ſuis pollens opibus, nihil indiga noſtri.*

head: and ſeldom or never ſacrificed at all, unleſs in compliance and condeſcenſion to the cuſtom of their Country. There's a very remarkable paſſage in *Tertullian*'s Apology, *Who forces a Philoſopher to ſacrifice*, &c.? It appears from thence, that the Philoſophers, no leſs than the Chriſtians, neglected the *Pagan* Worſhip and Sacrifices; though what was conniv'd at in the one, was made highly penal and capital in the other. *And hath made of one blood all nations of men, for to dwell on all the face of the Earth; and hath determin'd the times before appointed, and the bound of their habitation.* This Doctrine about the beginning of Humane Race, though agreeable enough to the *Platoniſts* and *Stoics*, is apparently levell'd againſt the *Epicureans* and *Ariſtotelians*: one of whom produced their Primitive Men from meer Accident or Mechaniſm; the other denied that Man had any beginning at all, but had eternally continued thus by Succeſſion and Propagation. Neither were the Commonalty of *Athens* unconcern'd in this point. For although, as we learn from * *Iſocrates*, *Demoſthenes* and others of their Countrymen, they profeſſed themſelves to be αὐτόχθονες, *Aborigines*, not tranſplanted by Colonies or otherwiſe from any Foreign Nation, but born out of their own Soil in *Attica*, and had the ſame Earth

Tertul. *Apolog. cap.* 46. *Quis enim Philoſophum ſacrificare compellit? Quinimmo & deos veſtros palam deſtruunt, & ſuperſtitiones veſtras commentariis quoque accuſant.*

v. 26.

* Iſocrates *in Panag.* Demoſth. *in Epitaph.* Cic *Or. pro Flacco.* Euripides. *&c.*

Earth for their Parent, their Nurſe and their Country; and though ſome perhaps might believe, that all the reſt of Mankind were derived from Them, and ſo might apply and interpret the Words of the Apoſtle to this fooliſh Tradition: yet that conceit of deriving the whole Race of Men from the *Aborigines* of *Attica* was entertain'd but by a few; for they generally allowed that the *Egyptians* and *Sicilians*, and ſome others were *Aborigines* alſo, as well as themſelves. Then follow the words of the Text, *That they ſhould ſeek the Lord, if haply they might feel after him, and find him; though he be not far from every one of us. For in him we Live, and Move, and have our Being.* And this he confirms by the Authority of a Writer that lived above 300 years before; *As certain alſo of your own Poets have ſaid, For we are alſo his Off-ſpring.* This indeed was no Argument to the *Epicurean* Auditors; who undervalued all Argument from Authority, and eſpecially from the Poets. Their Maſter *Epicurus* had boaſted, that in all his Writings he had not cited one ſingle Authority out of any Book whatſoever. And the Poets they particularly hated; becauſe on all occaſions they introduced the Miniſtry of the Gods, and taught the ſeparate Exiſtence of humane Souls. But it was of great weight and moment to the Common People; who held the Poets in mighty eſteem and veneration,

Diog. Laert. *in Præf.*

Thucyd. *lib. 6.* Herodot. *&c.*

v. 27, 28.

Plutarch. *de Aud. Poet. & contra Colot.*

Laert. *in vita* Epicuri.

on,

on, and uſed them as their Maſters of Morality and Religion. And the other Sects too of Philoſophers did frequently adorn and confirm their Diſcourſes by Citations out of Poets. *For as much then as we* v. 29. *are the off-ſpring of God, we ought not to think that the Godhead is like unto Gold or Silver, or Stone graven by art or man's device.* This is directly levell'd againſt the groſs Idolatry of the Vulgar, (for the Philoſophers are not concern'd in it) that believed the very Statues of Gold and Silver and other Materials, to be God, and terminated their Prayers in thoſe Images; as I might ſhew from many paſſages of Scripture, from the Apologies of the Primitive Chriſtians, and the Heathen Writers themſelves. *And* v. 30, 31. *the times of this ignorance God winked at,* (the meaning of which is, as upon a like occaſion the ſame Apoſtle hath expreſſed it, that *in times paſt he ſuffer'd* Act. 14. 16. *all Nations to walk in their own ways*) *but now commandeth every one to repent; Becauſe he hath appointed a day, in the which he will judge the world in righteouſneſs, by that man whom he hath ordained; whereof he hath given aſſurance unto all men, in that he hath raiſed him from the dead.* Hitherto the Apoſtle had never contradicted all his Audience at once: though at every part of his Diſcourſe ſome of them might be uneaſie, yet others were of his ſide, and all along a moderate ſilence and attention was obſerved, becauſe

every Point was agreeable to the notions of the greater Party. But *when they heard of the Reſurrection of the Dead*, the interruption and clamour became univerſal: ſo that here the Apoſtle was obliged to
v. 33. break off, and *depart from among them.* What could be the reaſon of this general diſſent from the notion of the Reſurrection, ſince almoſt all of them believed the Immortality of the Soul? St. *Chryſoſtom* hath a conceit, that the *Athenians* took ἀνάςασις (the original word for *Reſurrection*) to be preached to them as a Goddeſs, and in this fancy he is follow'd by ſome of the Moderns. The ground of the conjecture is the 18th verſe of this Chapter, where ſome ſaid, *What will this Babler ſay?* other ſome, *He ſeemeth to be a ſetter forth of ſtrange Gods* (ξένων δαιμονίων, *ſtrange Deities*, which comprehends both Sexes) *becauſe he preached unto them*, Ἰησοῦν καὶ τὴν ἀνάςασιν, *Jeſus and the Reſurrection.* Now, ſay they, it could not be ſaid *Deities* in the plural number, unleſs it be ſuppoſed that ἀνάςασις is a *Goddeſs*, as well as *Jeſus* a *God.* But we know, ſuch a permutation of Number is frequent in all Languages. We have another example of it in the very Text, *As certain*
v. 28. Arati Phœn. v. 5. Πάντη δ' Διὸς ἀρχόμεθα· πάντες, τοῦ γὰρ καὶ γένος ἐσμέν. *alſo of your own Poets have ſaid, For we are alſo his Off-ſpring.* And yet the Apoſtle meant only one, *Aratus* the *Cilician*, his Countryman, in whoſe Aſtronomical Poem this paſſage is now extant. So

that

that although he preached to the *Athenians* Jesus alone, yet by a common mode of speech he might be called, *a setter forth of strange Gods.* 'Tis my opinion, that the general distaste and clamour proceeded from a mistake about the nature of the Christian Resurrection. The word Resurrection (ἀναστήσασθαι and ἀνάστασις) was well enough known amongst the *Athenians*, as appears at this time from * *Homer*, *Æschylus* and *Sophocles*; they could hardly then possibly imagin it to signifie a Goddess. But then it always denoted a returning from the State of the Dead to this present World, to eat and drink and converse upon Earth, and so after another period of Life to die again as before. And *Festus* a Roman seems to have had the same apprehensions about it. For when he declares the case of St. *Paul* his Prisoner to King *Agrippa*, he tells him, That the Accusation was only about certain questions of the Jewish Superstition; and *of one Jesus which was dead, whom Paul affirmed to be alive.* So that when the *Athenians* heard him mention the Resurrection of the Dead, which according to their acceptation of the word was a contradiction to common Sense, and to the Experience of all Places and Ages; they had no patience to give any longer attention. His

* Hom. *Il.* ω. 551. Οὐδέ μιν ἀνστήσεις, &c. Æsch. Eumen. 655. Ἀνδρὸς δ' ἐπειδὰν αἷμ' ἀνασπάσῃ κόνις. Ἅπαξ θανόντος οὔτις ἔστ' ἀνάστασις. Soph. Electra, 136. Ἀλλ' οὔτοι τόν γ' ὡξ ἀΐδα παγκοίνου λίμνας πατέρ' ἀνστάσεις, οὔτε γόοισιν, οὐ λιταῖς.

Acts 25. 19.

Luke 24. 11. *words ſeemed to them as idle tales,* as the firſt news of our Saviour's Reſurrection did to the Apoſtles themſelves. All interrupted and mocked him, except a few, that ſeem to have underſtood him aright, which ſaid *they would hear him again of this matter.* Juſt as when our Saviour ſaid in an Allegorical and My-

John 6.53. ſtical ſenſe, *Except ye eat the Fleſh of the Son of Man, and drink his Blood, ye have no life in you*; the Hear-

v. 60. ers underſtood him literally and groſly. *The Jews therefore ſtrove among themſelves, ſaying, How can this man give us his Fleſh to eat? this is a hard ſaying,*

v. 66. *who can hear it? And from that time many of his Diſciples went back, and walked no more with him.*

I have now gone through this excellent Diſcourſe of the Apoſtle, in which many moſt important Truths are clearly and ſuccinctly deliver'd; ſuch as the Exiſtence, the Spirituality, and All-ſufficiency of God, the Creation of the World, the Origination of Mankind from one common ſtock according to the Hiſtory of *Moſes*, the Divine Providence in over-ruling all Nations and People, the new Doctrine of Repentance by the preaching of the Goſpel, the Reſurrection of the Dead, and the appointed Day of an univerſal Judgment. To all which particulars by God's Permiſſion and Aſſiſtance I ſhall ſay ſomething in due time. But at preſent I have confined my ſelf to that near and internal

and

and convincing Argument of the Being of God, which we have from Humane Nature it ſelf; and which appears to be principally here recommended by St. *Paul* in the words of the Text, *That they ſhould ſeek the Lord, if haply they might feel after him, and find him, though he be not far from every one of us. For in him* (that is, by his power) *we live, and move, and have our being.*

The Propoſition, which I ſhall ſpeak to, from this Text is this: That the very Life and Vital Motion and the Formal Eſſence and Nature of Man is wholly owing to the power of God: and that the conſideration of our Selves, of our own Souls and Bodies, doth directly and nearly conduct us to the acknowledgment of his Exiſtence. And,

1. I ſhall prove, That there is an immaterial Subſtance in us, which we call Soul and Spirit, eſſentially diſtinct from our Bodies: and that this Spirit doth neceſſarily evince the Exiſtence of a Supreme and Spiritual Being. And,

2. That the Organical Structure of Humane Bodies, whereby they are fitted to live and move and be vitally informed by the Soul, is unqueſtionably the workmanſhip of a moſt wiſe and powerfull and beneficent Maker. But I will reſerve this latter part for the next opportunity; and my preſent undertaking ſhall be this, To evince the

Being

Being of God from the conſideration of Humane Souls.

(1.) And firſt, I ſay, there is an immaterial Subſtance in us, which we call Soul, eſſentially diſtinct from our Bodies. I ſhall lay it down as ſelf-evident, That there is ſomething in our Compoſition, that thinks and apprehends, and reflects and deliberates; that determines and doubts, conſents and denies; that wills, and demurrs, and reſolves, and chooſes, and rejects; that receives various ſenſations and impreſſions from external objects, and produces voluntary motions of ſeveral parts of our Bodies. This every man is conſcious of; neither can any one be ſo Sceptical as to doubt of or deny it: that very *doubting* or *denying* being part of what I would ſuppoſe, and including ſeveral of the reſt in their Idea's and Notions. And in the next place 'tis as ſelf-evident, that theſe Faculties and Operations of Thinking, and Willing, and Perceiving, muſt proceed from ſomething or other as their efficient Cauſe: meer Nothing being never able to produce any thing at all. So that if theſe powers of Cogitation, and Volition, and Senſation, are neither inherent in Matter as ſuch, nor producible in Matter by any motion and modification of it; it neceſſarily follows, that they proceed from ſome cogitative Subſtance, ſome incorporeal Inhabitant within us, which we call Spirit and Soul. (1.) But

(1.) But firſt, theſe Faculties of Senſation and Perception are not inherent in Matter as ſuch. For if it were ſo; what monſtrous abſurdities would follow? Every Stock and Stone would be a percipient and rational Creature. We ſhould have as much feeling upon clipping a Hair of the Head, as upon pricking a Nerve. Or rather, as Men, that is, as a complex Being compounded of many vital parts, we ſhould have no feeling nor perception at all. For every ſingle Atom of our Bodies would be a diſtinct Animal, endued with ſelf-conſciouſneſs and perſonal Senſation of its own. And a great number of ſuch living and thinking Particles could not poſſibly by their mutual contract and preſſing and ſtriking compoſe one greater individual Animal, with one Mind and Underſtanding, and a vital Conſenſion of the whole Body: any more than a ſwarm of Bees, or a crowd of Men and Women can be conceived to make up one particular Living Creature compounded and conſtituted of the aggregate of them all.

(2.) It remains therefore, ſecondly, that ſeeing Matter in general, as Matter, has not any Senſation or Thought; if it have them at all, they muſt be the reſult of ſome Modification of it: it muſt acquire them by ſome Organical Diſpoſition; by ſuch and ſuch determinate Motions, by the action and

and paſſion of one Particle upon another. And this is the Opinion of every Atheiſt and counterfeit Deiſt of theſe times, that believes there is no Subſtance but Matter, and excludes all incorporeal Nature out of the number of Beings.

Now to give a clear and full confutation of this Atheiſtical Aſſertion, I will proceed in this method.

1. Firſt I will give a true Notion and Idea of Matter; whereby it will again appear that it has no inherent Faculty of Senſe and Perception.

2. I will prove, that no particular ſort of Matter, as the Brain and Animal Spirits, hath any power of Senſe and Perception.

3. I will ſhew, that Motion in general ſuperadded to Matter cannot produce any Senſe and Perception.

4. I will demonſtrate, that no particular ſort of Motion, as of the Animal Spirits through Muſcles and Nerves, can beget Senſe and Perception.

5. I will evince, that no Action and Paſſion of the Animal Spirits, one Particle upon another, can create any Senſe and Perception.

6. I will anſwer the Atheiſt's Argument of matter of Fact and Experience in brute Beaſts; which, ſay they, are allowed to be meer Matter, and yet have ſome degree of Senſe and Perception.

And

And first I will give a true Notion and Idea of Matter; whereby it will appear that it has no inherent Faculty of Sense and Perception. And I will offer no other, but what all competent Judges, and even Atheists themselves do allow of; and which being part of the *Epicurean* and *Democritean* Philosophy is providentially one of the best Antidotes against their other impious Opinions: as the Oil of Scorpions is said to be against the poison of their Stings. When we frame in our minds any notion of Matter, we conceive nothing else but Extension and Bulk; which is impenetrable and divisible and passive; by which three properties is understood, that any particular quantity of Matter doth hinder all other from intruding into its place, till it self be removed out of it; that it may be divided and broken into numerous parts of different sizes and figures, which by various ranging and disposing may produce an immense diversity of Surfaces and Textures; that if it once be bereaved of Motion, it cannot of it self acquire it again, but it either must be impell'd by some other Body from without, or, (say we, though not the Atheist) be intrinsecally moved by an immaterial self-active Substance, that can penetrate and pervade it. Wherefore in the whole Nature and Idea of Matter, we have nothing but Substance with Magnitude, and Figure, and Situati-

on, and a capacity of being moved and divided. So that no parts of Matter conſider'd by themſelves, are either hot or cold, either white or black, either bitter or ſweet, or betwixt thoſe extremes. All the various Mixtures and Conjugations of Atoms do beget nothing but new inward Texture, and alteration of Surface. No ſenſible Qualities, as Light, and Colour, and Heat, and Sound, can be ſubſiſtent in the Bodies themſelves abſolutely conſider'd, without a relation to our Eyes, and Ears, and other Organs of Senſe. Theſe Qualities are only the effects of our Senſation, which ariſe from the different motions upon our Nerves from objects without, according to their various modification and poſition. For example, when pellucid colourleſs Glaſs, or Water, by being beaten into powder or froth, do acquire a very intenſe whiteneſs; what can we imagine to be produced in the Glaſs or Water, but a new diſpoſition of parts? Nay an object under the ſelf-ſame diſpoſition and modification, when 'tis viewed by us under differing proportions, doth repreſent very differing colours, without any change at all in it ſelf. For that ſame opake and white Powder of Glaſs, when 'tis ſeen thro' a good Microſcope, doth exhibit all its little fragments pellucid and colourleſs; as the whole appear'd to the naked eye, before it was pounded. So that Whiteneſs,

and

and Redneſs, and Coldneſs, and the like, are only Idea's and Vital Paſſions in Us that ſee and feel: but can no more be conceived to be real and diſtinct Qualities in the Bodies themſelves; than Roſes or Honey can be thought to ſmell or taſte their own Sweetneſs, or an Organ be conſcious of its Muſick, or Gun-powder of its Flaſhing and Noiſe.

Thus far then we have proved, and 'tis agreed on all hands, that in our conception of any quantity of Body, there is nothing but Figure and Site, and a Capacity of Motion. Which Motion, if it be actually excited in it, doth only cauſe a new Order and Contexture of parts: ſo that all the Idea's of ſenſible Qualities are not inherent in the inanimate Bodies; but are the effects of their Motion upon our Nerves: and ſympathetical and vital Paſſions produced within our ſelves.

2. Our ſecond enquiry muſt be; what it is in the conſtitution and compoſition of a Man that hath the Faculty of receiving ſuch Idea's and Paſſions. Let us carry in our minds this true notion of Body in general, and apply it to our own Subſtance; and obſerve what prerogatives this Rational Machin (as the Atheiſts would make us to be) can challenge above other parcels of Matter. We obſerve then in this underſtanding piece of Clockwork; that his Body, as well as other ſenſeleſs

Matter, has colour, and warmth, and ſoftneſs, and the like. But we have proved it before, and 'tis acknowledged; that theſe Qualities are not ſubſiſtent in thoſe Bodies, but are Idea's and Senſations begotten in ſomething elſe. So that 'tis not Blood and Bones, that can be conſcious of their own hardneſs or redneſs: and we are ſtill to ſeek for ſomething elſe in our Frame and Make, that muſt receive theſe impreſſions. Will they ſay that theſe Idea's are performed by the Brain? But the difficulty returns upon them again: for we perceive that the like qualities of ſoftneſs, whiteneſs and warmth, do belong to the Brain it ſelf; and ſince the Brain is but Body, thoſe Qualities (as we have ſhewn) cannot be inherent in It, but are the Senſations of ſome other Subſtance without it. It cannot be the Brain then, which imagins thoſe qualities to be in it ſelf.

But they may ſay, 'tis not the Groſs Subſtance of the Brain that cauſes Perception; but the Animal Spirits, that have their reſidence there; which are void of ſenſible qualities, becauſe they never fall under our Senſes by reaſon of their minuteneſs. But we conceive, by our Reaſon, though we cannot ſee them with our Eyes, that every one of theſe alſo hath a determinate figure: they are Spheres, or Cubes, or Pyramids, or Cones, or of ſome ſhape or other that is irregular and nameleſs; and all theſe

theſe are but Modes and Affections of Magnitude; and the Idea's of ſuch Modes can no more be ſubſiſtent in the Atoms ſo modified, than the Idea of Redneſs was juſt now found to be inherent in the Blood, or that of Whiteneſs in the Brain. And what relation or affinity is there between a minute Body and Cogitation, any more than the greateſt? Is a ſmall drop of Rain any wiſer than the Ocean? or do we grind inanimate Corn into living and rational Meal? my very Nails, or my Hair, or the Horns and Hoofs of a Beaſt may bid as fair for Underſtanding and Senſe, as the fineſt Animal Spirits of the Brain.

3. But Thirdly, they will ſay, 'tis not the Bulk and Subſtance of the Animal Spirits, but their Motion and Agility, that produces Cogitation and Senſe. If then Motion in general or any degree of its velocity can beget Cogitation; ſurely a Ship under ſail muſt be a moſt intelligent Creature; though while ſhe lies at Anchor, thoſe Faculties be aſleep: ſome cold Water or Ice may be phlegmatick and ſenſeleſs; but when it boils in a Kettle, it has wonderfull Heats of Thinking and Ebullitions of Fancy. Nay the whole corporeal Maſs, all the brute and ſtupid Matter of the Univerſe muſt upon theſe terms be allowed to have Life and Underſtanding: ſince there is nothing that we know of, in a ſtate of abſolute Reſt.

Reſt. Thoſe things that ſeem to be at reſt upon the ſurface of the Earth, are daily wheel'd about its Axis, and yearly about the Sun with a prodigious ſwiftneſs.

4. But Fourthly, they will ſay, 'tis not Motion in general, that can do theſe feats of Senſation and Perception; but a particular ſort of it in an Organized Body through the determinate Roads and Channels of Muſcles and Nerves. But, I pray, among all the kinds of Motion, whether ſtraight or circular, or parabolical, or in what curve they pleaſe; what pretence can one make to Thinking and Liberty of Will, more than another? Why do not theſe perſons make a Diagram of theſe cogitative Lines and Angles; and demonſtrate their Properties of Perception and Appetite, as plainly as we know the other properties of Triangles and Circles? But how little can any Motion, either circular or other, contribute to the production of Thought? No ſuch circular Motion of an Atom can be all of it exiſtent at once; it muſt needs be made gradually and ſucceſſively both as to place and time: for Body cannot at the ſame inſtant be in more places than one. So that at any inſtant of time the moving Atom is but in one ſingle point of the Line. Therefore all its Motion but in that one point is either future or paſt; and no other parts are co-

exiſtent

exiſtent or contemporary with it. Now what is not preſent, is nothing at all, and can be the efficient of nothing. If Motion then be the cauſe of Thought; Thought muſt be produced by one ſingle Point of Motion, a Point with relation to time as well as to place. And ſuch a Point to our Conceptions is almoſt equivalent to Permanency and Reſt, or at leaſt to any other Point of any Motion whatſoever. What then is become of the privilege of that organical Motion of the Animal Spirits above any other? Again, we have ſhewn, that this circular and other Motion is but the ſucceſſive Flux of an Atom, and is never exiſtent together; and indeed is a pure *Ens Rationis*, an operation of the Soul, which conſidering paſt motion and future, and recollecting the whole by the Memory and Fancy, calls this by one denomination and that by another. How then can that Motion be the efficient of Thought, which is evidently the Effect and the Product of it?

5. But Fifthly, they will ſay farther, (which is their laſt refuge) that 'tis not Motion alone, or under this or that Denomination, that produceth Cogitation; but when it falls out that numerous Particles of Matter, aptly diſpoſed and directed, do interfere in their Motions, and ſtrike and knock one another; this is it which begets our Senſation.

All

All the active power and vigour of the Mind, our Faculties of Reaſon, Imagination and Will are the wonderfull reſult of this mutual Occurſe, this Pulſion and Repercuſſion of Atoms. Juſt as we experience it in the Flint and the Steel; you may move them apart as long as you pleaſe, to very little purpoſe: but 'tis the Hitting and Colliſion of them that muſt make them ſtrike Fire. You may remember I have proved before, that Light and Heat, and the reſt of thoſe Qualities, are not ſuch Idea's in the Bodies, as we perceive in our Selves. So that this ſmiting of the Steel with the Flint doth only make a Comminution, and a very rapid Whirling and Melting of ſome Particles: but that Idea of Flame is wholly in Us. But what a ſtrange and miraculous thing ſhould we count it, if the Flint and the Steel, inſtead of a few Sparks, ſhould chance to ſtrike out Definitions and Syllogiſms? And yet it's altogether as reaſonable, as this ſottiſh opinion of the Atheiſts; That dead ſenſeleſs Atoms can ever juſtle and knock one another into Life and Underſtanding. All that can be effected by ſuch encounters of Atoms, is either the imparting or receiving of Motion, or a new determination and direction of its Courſe. Matter, when it acts upon Matter, can communicate nothing but Motion; and that we have ſhew'd before to be utterly unable to produce

duce thoſe Senſations. And again, how can that Concuſſion of Atoms be capable of begetting thoſe internal and vital Affections, that Self-conſciouſneſs and other Powers and Energies that we feel in our Minds: ſeeing they only ſtrike upon the outward Surfaces; they cannot inwardly pervade one another; they cannot have any penetration of Dimenſions and Conjunction of Subſtance. But, it may be, theſe Atoms of theirs may have Senſe and Perception in them, but they are refractary and ſullen; and therefore, like Men of the ſame Tempers, muſt be bang'd and buffeted into Reaſon. And indeed that way of Argumentation would be moſt proper and effectual upon theſe Atheiſtical Atomiſts themſelves. 'Tis a vigorous Execution of good Laws, and not rational Diſcourſes only, either neglected or not underſtood, that muſt reclaim the profaneneſs of thoſe perverſe and unreaſonable Men. For what can be ſaid more to ſuch perſons, that are either ſo diſingenuous or ſo ſtupid, as to profeſs to believe, That all the natural Powers and acquired Habits of the Mind, that penetrating Underſtanding and accurate Judgment, that ſtrength of Memory and readineſs of Wit, that Liberality and Juſtice and Prudence and Magnanimity, that Charity and Beneficence to Mankind, that ingenuous fear and awfull Love of God, that comprehen-

ſive Knowledge of the Hiſtories and Languages of ſo many Nations, that experienced Inſight into the works and wonders of Nature, that rich Vein of Poetry and inexhauſted Fountain of Eloquence, thoſe lofty flights of Thought and almoſt intuitive Perception of abſtruſe Notions, thoſe exalted Diſcoveries of Mathematical Theorems and Divine Contemplations; all theſe admirable Endowments and Capacities of humane Nature, which we ſometimes ſee actually exiſtent in one and the ſame Perſon, can proceed from the blind ſhuffling and caſual claſhing of Atoms. I could as eaſily take up with that ſenſeleſs aſſertion of the *Stoicks*, That Vertues and Vices and Sciences and Arts, and Fancies and Paſſions and Appetites are all of them real Bodies and diſtinct Animals; as with this of the Atheiſt, That they can all be derived from the Power of meer Bodies. 'Tis utterly incredible and impoſſible; and we cannot without indignation go about to refute ſuch an abſurd imagination, ſuch a groſs contradiction to unprejudiced Reaſon. And yet if the Atheiſts had not been driven from all their poſts and their ſubterfuges; if we had not purſued their Atoms through all their turnings and windings, their cells and receſſes, their interferings and juſtlings; they would boaſt, that they could not be anſwer'd; and make a mighty flutter and triumph.

Seneca *Ep.* 113. Plutarch *de Contrad Stoic.*

Nay

Nay though they are ſo miſerably confounded and baffled, and can offer no further explication of the Cauſe and the Manner; yet they will, Sixthly, urge matter of Fact and Experience, that meer Body may produce Cogitation and Senſe. For, ſay they, do but obſerve the actions of ſome Brutes, how nearly they approach to humane Reaſon, and viſibly diſcover ſome glimpſes of Underſtanding: and if that be performed by the pure Mechaniſm of their Bodies (as many do allow, who yet believe the Being of God, and an immaterial Spirit in Man) then 'tis but raiſing our Conceptions, and ſuppoſing Mankind to be Engines of a finer Make and Contexture, and the buſineſs is done. I muſt confeſs, that the *Carteſians* and ſome others, men that have given no occaſion to be ſuſpected of Irreligion, have aſſerted that Brutes are meer *Machins* and *Automata*. I cannot now engage in the Controverſie, neither is there any neceſſity to do ſo; for Religion is not endanger'd by either opinion. If Brutes be ſaid to have Senſe and Immaterial Souls; what need we be concern'd, whether thoſe Souls ſhall be immortal, or annihilated at the time of Death. This objection ſuppoſes the Being of God; and He will do all things for the wiſeſt and beſt ends. Or if Brutes be ſuppoſed to be bare Engins and Machins; I admire and adore the divine Artifice and Skill in ſuch

a wonderfull contrivance. But I ſhall deny then that they have any Reaſon or Senſe, if they be nothing but Matter. Omnipotence it ſelf cannot create cogitative Body. And 'tis not any imperfection in the power of God, but an incapacity in the Subject; The Idea's of Matter and Thought are abſolutely incompatible. And this the *Carteſians* themſelves do allow. Do but convince Them, that Brutes have the leaſt participation of Thought, or Will, or Appetite, or Senſation, or Fancy; and they'll readily retract their Opinion. For none but beſotted Atheiſts, do joyn the two Notions together, and believe Brutes to be rational or ſenſitive Machins. They are either the one or the other; either endued with Senſe and ſome glimmering Rays of Reaſon from a higher Principle than Matter; or (as the *Carteſians* ſay) they are purely Body, void of all Senſation and Life: and like the Idols of the Gentiles, *they have eyes and ſee not; ears, and hear not; noſes, and ſmell not*: they eat without hunger, and drink without thirſt, and howl without pain. They perform the outward material actions; but they have no inward Self-conſciouſneſs, nor any more Perception of what they do or ſuffer, than a Looking-Glaſs has of the Objects it reflects, or the Index of a Watch of the Hour it points to. And as one of thoſe Watches, when it was firſt preſented

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to the Emperour of *China*, was taken there for an Animal: ſo on the contrary, our *Carteſians* take brute Animals for a ſort of Watches. For conſidering the infinite diſtance betwixt the poor mortal Artiſt, and the Almighty Opificer; the few Wheels and Motions of a Watch, and the innumerable Springs and Organs in the Bodies of Brutes; they may affirm (as they think, without either abſurdity or impiety) that they are nothing but moving *Automata*, as the fabulous * Statues of *Dædalus*, bereaved of all true life, and vital Senſation; which never act ſpontaneouſly and freely, but as Watches muſt be wound up to ſet them a going; ſo *their* Motions alſo are excited and inhibited, are moderated and managed by the Objects without them.

* *Vide* Zenobium & Suidam *in* Δαιδάλου πόνημα, *&* Scholiaſtem Eurip. Hecubæ *V.* 838.

(2.) And now that I have gone through the ſix parts that I propoſed, and ſufficiently ſhewn that Senſe and Perception can never be the product of any kind of Matter and Motion; it remains therefore, that it muſt neceſſarily proceed from ſome Incorporeal Subſtance within us. And though we cannot conceive the manner of the Soul's Action and Paſſion; nor what hold it can lay on the Body, when it voluntarily moves it: yet we are as certain, that it doth ſo, as of any Mathematical Truth whatſoever; or at leaſt of ſuch as are proved from the Impoſſibility

Impoſſibility or Abſurdity of the Contrary, a way of Proof that is allowed for infallible Demonſtration. Why one motion of the Body begets an Idea of Pleaſure in the Mind, another an Idea of Pain; why ſuch a diſpoſition of the Body induces Sleep, another diſturbs all the operations of the Soul, and occaſions a Lethargy or Frenzy; this Knowledge exceeds our narrow Faculties, and is out of the reach of our diſcovery. I diſcern ſome excellent Final cauſes of ſuch a vital Conjunction of Body and Soul; but the inſtrumental I know not, nor what inviſible Bands and Fetters unite them together. I reſolve all that into the ſole Pleaſure and *Fiat* of our Omnipotent Creator: whoſe Exiſtence (which is my laſt Point) is ſo plainly and nearly deducible from the eſtabliſhed proof of an Immaterial Soul; that no wonder the reſolved Atheiſts do ſo labour and beſtir themſelves to fetch Senſe and Perception out of the Power of Matter. I will diſpatch it in three words. For ſince we have ſhewn, that there is an Incorporeal Subſtance within us: whence did that proceed, and how came it into Being? It did not exiſt from all Eternity, that's too abſurd to be ſuppoſed; nor could it come out of nothing into Being without an Efficient Cauſe. Something therefore muſt have created our Souls out of Nothing; and that Something (ſince nothing can give more than

it

it has) muſt it ſelf have all the Perfections, that it hath given to them. There is therefore an immaterial and intelligent Being, that created our Souls: which Being was either eternal it ſelf, or created immediately or ultimately by ſome other Eternal, that has all thoſe Perfections. There is therefore Originally *an Eternal, Immaterial, Intelligent Creator*; all which together are the *Attributes of God alone.*

And now that I have finiſhed all the parts, which I propoſed to diſcourſe of; I will conclude all with a ſhort application to the Atheiſts. And I would adviſe them as a Friend, to leave off this dabbling and ſmattering in Philoſophy, this ſhuffling and cutting with Atoms. It never ſucceeded well with them, and they always come off with the loſs. Their old Maſter *Epicurus* ſeems to have had his Brains ſo muddled and confounded with them, that he ſcarce ever kept in the right way; though the main Maxim of his Philoſophy was to truſt to his Senſes, and follow his Noſe. I will not take notice of his doting conceit, that the Sun and Moon are no bigger, than they appear to the Eye, a foot or half a yard over; and that the Stars are no larger than ſo many Glow-worms. But let us ſee how he manages his Atoms, thoſe Almighty Tools that do every thing of themſelves without the help of

Epicurus *apud* Laert. Lucret. *l.* 5. Cicero *de Fin. l.* 1. *Acad. l.* 2.

Lucret *l.* 2. Cic *de Fato & l.* 1. *de Nat. Deorum* Plutarch, *&c.*

of a Workman. When the Atoms (ſays he) *deſcend* in infinite ſpace (very ingeniouſly ſpoken, to make High and Low in Infinity) they do not fall plumb down, but decline a little from the Perpendicular, either obliquely or in a Curve: and this Declination (ſays he) from the direct Line is the cauſe of our Liberty of Will. But, I ſay, this Declination of Atoms in their Deſcent, was it ſelf either neceſſary or voluntary. If it was neceſſary, how then could that Neceſſity ever beget Liberty? if it was voluntary, then Atoms had that power of Volition before: and what becomes then of the *Epicurean* Doctrine of the fortuitous Production of Worlds? The whole buſineſs is Contradiction and ridiculous Nonſenſe. 'Tis as if one ſhould ſay, that a Bowl equally poized, and thrown upon a plain and ſmooth Bowling-Green, will run neceſſarily and fatally in a direct Motion: but if it be made with a Byas, that may decline it a little from a ſtraight Line, it may acquire by that Motion a Liberty of Will, and ſo run ſpontaneouſly to the Jack. It would behoove the Atheiſts to give over ſuch trifling as this, and reſume the old ſolid way of confuting Religion. They ſhould deny the Being of the Soul, becauſe they cannot ſee it. This would be an invincible Argument againſt us: for we can never exhibit it to their Touch, nor expoſe it to their View; nor ſhew

ſhew them the Colour and Complexion of a Soul. They ſhould diſpute, as a bold Brother of theirs did; That he was ſure there was no God, becauſe (ſays he) if there was one, he would have ſtruck me to Hell with Thunder and Lightning, that have ſo reviled and blaſphemed him. This would be an Objection indeed. Alas, all that we could anſwer, is in the next words to the Text, *That God hath appointed a day in which he will judge all the world in Righteouſneſs*, and that *the Goodneſs and Forbearance, and Long-ſuffering of God*, which are ſome of his Attributes, and Eſſential Perfections *of his Being*, ought not to be abuſed and perverted into arguments *againſt his Being*. But if this will not do, we muſt yield our ſelves overcome: for we neither can, nor deſire to *command fire to come down from Heaven and conſume them*; and give them ſuch experimental Conviction of the Exiſtence of God. So that they ought to take theſe Methods, if they would ſucceſsfully attack Religion. But if they will ſtill be medling with Atoms, be hammering and ſqueezing Underſtanding out of them; I would adviſe them to make uſe of their own Underſtandings for the Inſtance. Nothing, in my opinion could run us down, more effectually than that. For we readily allow, that if any Underſtanding can poſſibly be produced by ſuch claſhing of ſenſeleſs Atoms;

'tis that of an Atheiſt, that hath the faireſt Pretenſions and the beſt Title to it. We know, it is *the Fool, that hath ſaid in his heart, there is no God.* And 'tis no leſs a Truth than a Paradox, That there are no greater *Fools* than Atheiſtical *Wits*; and none ſo *credulous* as *Infidels*. No Article of Religion, though as demonſtrable as the Nature of the thing can admit, hath credibility enough for them. And yet theſe ſame cautious and quick-ſighted Gentlemen can wink and ſwallow down this ſottiſh Opinion about Percipient Atoms, which exceeds in Incredibility all the Fictions of *Æſop*'s Fables. For is it not every whit as likely or more, that Cocks and Bulls might diſcourſe, and Hinds and Panthers hold Conferences about Religion, as that Atoms can do ſo? that Atoms can invent Arts and Sciences, can inſtitute Society and Government, can make Leagues and Confederacies, can deviſe Methods of Peace and Stratagems of War? And moreover, the Modeſty of Mythology deſerves to be commended, the Scenes there are laid at a diſtance; 'Tis once upon a time, in the Days of Yore, and in the Land of *Utopia*, there was a Dialogue between an Oak and a Cedar: whereas the Atheiſt is ſo impudently ſilly, as to bring the Farce of his Atoms upon the Theatre of the preſent Age; to make dull ſenſeleſs Matter tranſact all publick and private Affairs, by Sea and by Land,

Land, in Houſes of Parliament, and Cloſets of Princes. Can any Credulity be comparable to this? If a Man ſhould affirm, that an Ape caſually meeting with Pen, Ink, and Paper, and falling to ſcribble, did happen to write exactly the *Leviathan* of *Thomas Hobbs*: Would an Atheiſt believe ſuch a ſtory? and yet he can eaſily digeſt as incredible as that; that the innumerable Members of a Humane Body, which in the ſtyle of the Scripture *are all written in the Book of God*, and may admit of almoſt infinite Variations and Tranſpoſitions above the xxiv Letters of the Alphabet, were at firſt fortuitouſly ſcribled, and by meer accident compacted into this beautifull, and noble and moſt wonderfully uſefull Frame, which we now ſee it carry. But this will be the Argument of my next Diſcourſe, which is the ſecond Propoſition drawn from the Text, That the Admirable Structure of Humane Bodies, whereby they are fitted to live and move, and be vitally informed by the Soul, is unqueſtionably the Workmanſhip of a moſt wiſe and powerfull and beneficent Maker: *To which Almighty Creator, together with the Son and the Holy Ghoſt, be all Honour and Glory and Majeſty and Power both now and from henceforth evermore.* Amen. Pſal. 139. 16.

A CONFUTATION OF ATHEISM FROM THE *Structure and Origin of Humane Bodies.*

PART I.

The *Third* SERMON preached *May* 2. 1692.

Acts XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him; though he be not far from every one of us: for in him we Live, and Move, and have our Being.

I Have ſaid enough in my laſt, to ſhew the fitneſs and pertinency of the Apoſtle's Diſcourſe to the perſons he addreſs'd to: whereby it ſufficiently appears that he was no *Babler*, as ſome of the *Athenian* Rabble reproached him; not

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a σπερμολόγος, a buſie prating Fellow; as in another language they ſay *Sermones ſerere*, and *Rumores ſerere* in a like mode of Expreſſion; that he did not talk at random, but was throughly acquainted with the ſeveral humours and opinions of his Auditors. And as *Moſes was learned in all the Wiſdom of the Ægyptians*, ſo it is manifeſt from this Chapter alone, if nothing elſe had been now extant, that St. *Paul* was a great Maſter in all the Learning of the *Greeks*. One thing further I ſhall obſerve from the words of the Text, before I enter upon the Subject which I propoſed; that it requires ſome Induſtry and Conſideration to find out the Being of God; we muſt *ſeek the Lord*, and *feel after him*, before we can *find* him by the Light of Nature. The ſearch indeed is not very tedious nor difficult; *He is not far from every one of us; for in him we live, and move, and have our Being*. The Conſideration of our Mind and Underſtanding, which is an incorporeal Subſtance independent from Matter; and the contemplation of our own Bodies, which have all the ſtamps and characters of excellent Contrivance; theſe alone, though we look upon nothing abroad, do very eaſily and proximately guide us to the wiſe Author of all things. But however, as we ſee in our Text, ſome Thoughts and Meditation are neceſſary to it; and a man may poſſibly be ſo ſtupid, or wilfully ignorant or perverſe,

Plautus. Virgil. Livius.

verſe, as not to have *God in all his thoughts*, or to *ſay in his heart, There is none.* And this being obſerved, we have an effectual anſwer to that Cavil of the Atheiſts; who make it an objection againſt the Being of God, that they do not diſcover him without any Application, in ſpite of their corrupt Wills and debauch'd Underſtandings. If, ſay they, ſuch a God as we are told of, had created and formed us, ſurely he would have left upon our Minds, a native and indeleble Inſcription of Himſelf, whereby we muſt needs have *felt* him, even without *ſeeking*, and believed in him whether we would or no. So that theſe Atheiſts being conſcious to themſelves, that they are void of ſuch Belief, which (they ſay) if God was, would actually and neceſſarily be in them, do bring their own wicked Doubting and Denying of God, as Evidence againſt his Exiſtence; and make their very Infidelity an argument for it ſelf. To which we reply, That God hath endu'd Mankind with Powers and Abilities, which we call natural Light, and Reaſon, and common Senſe; by the due uſe of which we cannot miſs of the Diſcovery of his Being; and this is ſufficient. But as to that original Notion and Propoſition, GOD IS, which the Atheiſt pretends ſhould have been actually imprinted on us, antecedently to all uſe of our Faculties; we may affirm, that the abſence of ſuch a Notion doth not give the leaſt

leaſt preſumption againſt the truth of Religion: becauſe though God be ſuppoſed to be, yet that Notion diſtinct from our Faculties would not be requiſite; nor is it aſſerted by Religion. *Firſt*, it would not be requiſite; becauſe, without any ſuch primitive Impreſſion, we can eaſily attain to the knowledge of the Deity by the ſole uſe of our Natural Reaſon. And again, ſuch an Impreſſion would have render'd the Belief of a God irreſiſtible and neceſſary, and thereby have bereaved it of all that is good and acceptable in it. For as the taking away the Freedom of Humane Will, and making us meer Machins under fatal Ties and Impulſes, would deſtroy the very nature of Moral Vertue; ſo likewiſe as to Faith, there would be nothing worthy of praiſe and recompence in it, if there were left no poſſibility of Doubting or Denying. And *ſecondly*, ſuch a radical Truth, GOD IS, ſpringing up together with the Eſſence of the Soul, and previous to all other Thoughts, is not aſſerted by Religion. No ſuch thing, that I know of, is affirmed or ſuggeſted by the Scriptures. There are ſeveral Topics there uſed againſt the Atheiſm and Idolatry of the Heathens; ſuch as the viſible marks of Divine Wiſdom and Goodneſs in the Works of the Creation, the vital Union of Souls with Matter, and the admirable Structure of animate Bodies, and the like. But if our A-

poſtle

poſtle had aſſerted ſuch an anticipating Principle engraven upon our Souls before all Exerciſe of Reaſon; what did he talk of *ſeeking the Lord, if haply they might feel after him and find him*? ſince if the knowledge of him was in that manner innate and perpetual, there would be no occaſion of *ſeeking*, nor any *hap* or hazard in the finding. Such an Inſcription would be ſelf evident without Reaſoning or Study, and could not fail conſtantly to exert its Energy in their Minds. What did he talk of the *Unknown God*, and *ignorantly worſhipping*? when if ſuch an Original Signature were always inherent in their hearts; God could not be unknown to, or ignorantly worſhipp'd by any. That primary Propoſition would have been clear, and diſtinct, and efficacious, and univerſal in the minds of Men. S. *Paul* therefore, it appears, had no apprehenſion of ſuch a Firſt Notion; nor made uſe of it for an argument; which (ſince whoſoever hath it, muſt needs know that he hath it) if it be not believed before by the Adverſary, is falſe; and if it be believed, is ſuperfluous; and is of ſo frail and brittle a texture, that whereas other arguments are not anſwered by bare denying without contrary Proof, the meer doubting and disbelieving of this muſt be granted to be *ipſo facto* the breaking and confuting of it. Thus much therefore we have proved againſt the Atheiſt; that ſuch

ſuch an original irreſiſtible Notion is neither requiſite upon ſuppoſition of a Deity, nor is pretended to by Religion; ſo that neither the Abſence of it is any argument againſt the Being of God, nor a ſuppoſed falſe Aſſertion of it an objection againſt the Scripture. 'Tis enough that all are furniſh'd with ſuch Natural Powers and Capacities; that if they ſeriouſly reflect, if they *ſeek the Lord* with meditation and ſtudy, they cannot fail of *finding* and diſcovering him: whereby God is not *left without witneſs*, but the Atheiſt *without excuſe*. And now I haſte to the ſecond Propoſition deduced from the Text, and the argument of my preſent Diſcourſe, That the organical Structure of humane Bodies whereby they are fitted to live, and move, and be vitally informed by the Soul is unqueſtionably the workmanſhip of a moſt wiſe, and powerfull and beneficent Maker.

Firſt, 'Tis allowed and acknowledged by all parties, that the Bodies of Men and other Animals are excellently well fitted for Life, and Motion, and Senſation; and the ſeveral parts of them well adapted and accommodated to their particular Functions. The Eye is very proper and meet for ſeeing, the Tongue for taſting and ſpeaking, the Hand for holding and lifting, and ten thouſand Operations beſide: and ſo for the inward Parts; the Lungs are ſuitable for Reſpiration, the Stomach for Concocti-

on, the Lacteous Veſſels for the Reception of the Chyle, the Heart for the Diſtribution of the Blood to all the parts of the Body. This is matter of Fact, and beyond all diſpute; and in effect is no more than to ſay, that *Animals are Animals*; for if they were deprived of theſe Qualifications, they could not be ſo. This therefore is not the matter in Queſtion between us and the Atheiſts: But the Controverſie is here. We, when we conſider ſo many conſtituent parts in the Bodies of Men, all admirably compacted into ſo noble an Engine; in each of the very Fingers, for example, there are Bones, and Griſtles, and Ligaments, and Membranes, and Muſcles, and Tendons, and Nerves, and Arteries, and Veins, and Skin, and Cuticle, and Nail; together with Marrow, and Fat, and Blood, and other Nutricious Juices; and all thoſe ſolid Parts of a determinate Size, and Figure, and Texture, and Situation; and each of them made up of Myriads of little Fibres and Filaments, not diſcoverable by the naked Eye; I ſay, when we conſider how innumerable parts muſt conſtitute ſo ſmall a member, as the Finger, we cannot look upon It or the whole Body, wherein appears ſo much Fitneſs and Uſe, and Subſerviency to infinite Functions, any otherwiſe than as the effect of Contrivance and Skill, and conſequently the Workmanſhip of a moſt Intelligent and Beneficent

Beneficent Being. And though now the Propagation of Mankind be in a ſettled method of Nature, which is the inſtrument of God: yet we affirm that the firſt Production of Mankind was by the immediate Power of the Almighty Author of Nature: and that all ſucceeding Generations of Men are the Progeny of one primitive Couple. This is a Religious Man's account of the Frame and Origination of himſelf. Now the Atheiſts agree with us, as to the Fitneſs of Man's Body and its ſeveral Parts to their various Operations and Functions (for that is viſible and paſt all contradiction) but they vehemently oppoſe, and horribly dread the Thought, That this Uſefulneſs of the Parts and the Whole ſhould firſt ariſe from Wiſdom and Deſign. So that here will be the point in debate, and the ſubject of our preſent Undertaking; Whether this acknowledged Fitneſs of Humane Bodies muſt be attributed, as we ſay, to a wiſe and good God; or, as the Atheiſt averr, to dead ſenſeleſs Matter. They have contrived ſeveral tricks and *methods of Deceit*, one repugnant to another, to evade (if poſſible) this moſt cogent Proof of a Deity; All which I will propoſe and refute: and I hope to make it appear, that here, as indeed every where, but here certainly, in the great Dramatick Poem of Nature, is, *dignus Deo vindice Nodus*, a neceſſity of introducing a God. Μεθοδείας τῆς πλάνης. Eph. 4. 14.

And firſt, I will anſwer what Exceptions they can have againſt Our account: and ſecondly, I will confute all the Reaſons and Explications they can give of their Own.

1. *Firſt*, I will anſwer what Exceptions they can have againſt Our account of the Production of Mankind. And they may object, That the Body it ſelf, though pretty good in its kind and upon their *Hypotheſis*, nevertheleſs doth not look like the Workmanſhip of ſo great a Maſter, as is pretended by Us; that infinite Wiſdom and Goodneſs and Power would have beſtowed upon us more Senſes than five, or at leaſt theſe five in a much higher Perfection; that we could never have come out of the Hands of the Almighty, ſo ſubject to numerous Diſeaſes, ſo obnoxious to violent Deaths; and at beſt, of ſuch a ſhort and tranſitory Life. They can no more aſcribe ſo ſorry an Effect to an Omniſcient Cauſe, than ſome ordinary piece of Clockwork with a very few motions and uſes, and thoſe continually out of order, and quickly at an end, to the beſt Artiſt of the Age. But to this we reply: *Firſt*, as to the five Senſes, it would be raſh indeed to affirm, That God, if he had pleaſed, could not have endued us with more. But thus much we may averr, That though the Power of God be infinite and perfect, yet the Capacities of Matter

Matter are within limits and bounds. Why then doth the Atheiſt ſuſpect that there may poſſibly be any more ways of Senſation than what we have already? Hath he an Idea, or Notion, or Diſcovery of any more? So far from that, that he cannot make any addition or progreſs in thoſe very Senſes he hath, further than they themſelves have informed him. He cannot imagine one new Colour, or Taſt, or Smell, beſide thoſe that have actually fallen under his Senſes. Much leſs can he that is deſtitute of an entire Senſe, have any Idea or Repreſentation of it; as one that is born Deaf hath no Notion of Sounds; or Blind, of Colours and Light. If then the Atheiſt can have no Imagination of more Senſes than five, why doth he ſuppoſe that a Body is capable of more? If we had double or triple as many, there might ſtill be the ſame ſuſpicion for a greater number without end; and the Objection therefore in both caſes is equally unreaſonable and groundleſs. *Secondly*, we affirm, that our Senſes have that degree of Perfection which is moſt fit and ſuitable to our Eſtate and Condition. For though the *Eye* were ſo piercing, as to deſcry even opake and little Objects ſome hundreds of Leagues off, even that improvement of our ſight would do us little ſervice; it would be terminated by neighbouring Hills and Woods, or in the largeſt and

eveneſt

eveneſt plain by the very convexity of the Earth, unleſs we could always inhabit the tops of Mountains and Cliffs, or had Wings too to fly aloft, when we had a mind to take a Proſpect. And if Mankind had had Wings (as perhaps ſome extravagant Atheiſt may think us deficient in that) all the World muſt have conſented to clip them; or elſe Humane Race had been extinct before this time, nothing upon that ſuppoſition being ſafe from Murder and Rapine. Or if the *Eye* were ſo acute, as to rival the fineſt Microſcopes, and to diſcern the ſmalleſt Hair upon the leg of a Gnat, it would be a curſe and not a bleſſing to us; it would make all things appear rugged and deformed; the moſt finely poliſh'd Chryſtal would be uneven and rough: The ſight of our own ſelves would affright us: The ſmootheſt Skin would be beſet all over with ragged Scales, and briſtly Hairs. And beſide, we could not ſee at one view above what is now the ſpace of an Inch, and it would take a conſiderable time to ſurvey the then mountainous bulk of our own Bodies. Such a Faculty of ſight ſo diſproportion'd to our other Senſes and to the Objects about us would be very little better than Blindneſs it ſelf. And again, God hath furniſhed us with Invention and Induſtry, ſo that by optical Glaſſes we can more than ſupply that imaginary defect of our own

own Eyes, and diſcover more remote and minute Bodies with that aſſiſtance, than perhaps the moſt whimſical Atheiſt would deſire to do without it. So likewiſe if our Senſe of *Hearing* were exalted proportionably to the former, what a miſerable condition would Mankind be in? What whiſper could be low enough, but many would over-hear it? What Affairs, that moſt require it, could be tranſacted with ſecrecy? and whither could we retire from perpetual humming and buzzing? every breath of Wind would incommode and diſturb us: we ſhould have no quiet or ſleep in the ſilenteſt nights and moſt ſolitary places; and we muſt inevitably be ſtruck Deaf or Dead with the noiſe of a clap of Thunder. And the like inconveniences would follow, if the Senſe of *Feeling* was advanced to ſuch a degree as the Atheiſt requires. How could we ſuſtain the preſſure of our very Cloaths in ſuch a condition; much leſs carry burthens and provide for conveniences of Life? We could not bear the aſſault of an Inſect, or a Feather, or a puff of Air without pain. There are examples now of wounded perſons, that have roared for anguiſh and torment at the diſcharge of Ordnance, though at a very great diſtance; what inſupportable torture then ſhould we be under upon a like concuſſion in the Air, when all the whole Body would have the tenderneſs

derneſs of a Wound? In a word, all the Changes and Emendations that the Atheiſts would make in our Senſes, are ſo far from being Improvements, that they would prove the utter Ruin and Extirpation of Mankind.

But perhaps they may have better ſucceſs in their complaints about the Diſtempers of the Body and the Shortneſs of Life. We do not wonder indeed, that the Atheiſt ſhould lay a mighty ſtreſs upon this Objection. For to a man that places all his Happineſs in the Indolency and Pleaſure of Body, what can be more terrible than Pain or a Fit of Sickneſs? nothing but Death alone, the moſt dreadfull thing in the world. When an Atheiſt reflects upon Death, his very Hope is Deſpair; and 'tis the crown and top of his Wiſhes, that it may prove his utter Diſſolution and Deſtruction. No queſtion if an Atheiſt had had the making of himſelf, he would have framed a Conſtitution that could have kept pace with his inſatiable Luſt, been invincible by Gluttony and Intemperance, and have held out vigorous a thouſand years in a perpetual Debauch. But we anſwer; *Firſt*, in the words of St. *Paul*:

Rom. 9. 20. *Nay, but, O Man, who art thou, that replieſt againſt God? ſhall the thing formed ſay to him that formed it, Why haſt thou made me thus?* We adore and magnifie his moſt holy Name for his undeſerved Mercy towards

towards us, that he made us the Chief of the viſible Creation; and freely acquit his Goodneſs from any imputation of Unkindneſs, that he has placed us no higher. *Secondly*, Religion gives us a very good account of the preſent Infirmity of our Bodies. Man at his firſt Origin was a Veſſel of Honour, when he came firſt out of the Hands of the Potter; endued with all imaginable Perfections of the Animal Nature; till by Diſobedience and Sin, Diſeaſes and Death came firſt into the World. *Thirdly*, The Diſtempers of the Body are not ſo formidable to a Religious Man, as they are to an Atheiſt: He hath a quite different judgment and apprehenſion about them: he is willing to believe, that our preſent condition is better for us in the Iſſue, than that uninterrupted Health and Security, that the Atheiſt deſires; which would ſtrongly tempt us to forget God and the concerns of a better Life. Whereas now he receives a Fit of Sickneſs, as the παιδεία τῦ παλεὸς, the kind Chaſtiſement and Diſcipline of his Heavenly Father, to wean his Affections from the World, where he is but as on a Journey; and to fix his thoughts and deſires on things above, where his Country and his Dwelling is: that where he hath placed his *Treaſure* and Concerns, *there his heart may be alſo*. *Fourthly*, Moſt of the Diſtempers that are incident to us are of our own making, the effects

of abuſed Plenty, and Luxury, and muſt not be charged upon our Maker; who notwithſtanding out of the Riches of his Compaſſion hath provided for us ſtore of excellent Medicines, to alleviate in a great meaſure thoſe very Evils which we bring upon our ſelves. And now we are come to the laſt Objection of the Atheiſt, That Life is too ſhort. Alas for him, what pity 'tis that he cannot wallow immortally in his ſenſual Pleaſures! But if his Life were many whole Ages longer than it is, he would ſtill make the ſame Complaint, *Brevis eſt hic fructus homullis.* For Eternity, and that's the thing he trembles at, is every whit as long, after a thouſand years as after fifty. But Religion gives Us a better proſpect and makes us look beyond the gloomy Regions of Death with Comfort and Delight: *When this corruptible ſhall put on incorruption, and this mortal put on immortality.* We are ſo far from repining at God, that he hath not extended the period of our Lives to the Longævity of the Antediluvians; that we give him thanks for contracting the Days of our Trial, and receiving us more maturely into thoſe Everlaſting Habitations above, that he hath prepared for us.

Lucret. *l* 3.

And now that I have anſwer'd all the Atheiſt's Exceptions againſt Our account of the Production of Mankind, I come in the next place to examine all

all the Reaſons and Explications they can give of their own.

The Atheiſts upon this occaſion are divided into Sects, and (which is the mark and character of Error) are at variance and repugnancy with each other and with themſelves. *Some* of them will have Mankind to have been thus from all Eternity. But the reſt do not approve of infinite Succeſſions, but are poſitive for a Beginning; and they alſo are ſubdivided into three Parties: the *firſt* aſcribe the Origin of Men to the Influence of the Stars upon ſome extraordinary Conjunction or Aſpect: Others again reject all Aſtrology; and *ſome* of theſe mechanically produce Mankind, at the very firſt Experiment, by the action of the Sun upon duly prepared Matter: but *others* are of opinion, that after infinite blundering and miſcarrying, our Bodies at laſt came into this Figure by meer Chance and Accident. There's no Atheiſt in the World, that reaſons about his Infidelity (which God knows moſt of them never do) but he takes one of theſe four Methods. I will refute them every one in the ſame order that I have named them: the two former in the preſent Diſcourſe, reſerving the others for another occaſion.

I. And *Firſt*, the Opinion of thoſe Atheiſts that will have Mankind and other Animals to have ſub-

ſiſted eternally in infinite Generations already paſt, will be found to be flat Non-ſence and Contradiction to it ſelf, and repugnant alſo to matter of Fact. *Firſt*, it is contradiction to it ſelf. Infinite Generations of Men (they ſay) are already paſt and gone: but whatſoever is now paſt, was once actually preſent; ſo that each of thoſe Infinite Generations was once in its turn actually preſent: therefore all except One Generation were once future and not in being, which deſtroys the very ſuppoſition: For either that One Generation muſt it ſelf have been Infinite, which is Nonſence; or it was the Finite Beginning of Infinite Generations between it ſelf and us, that is Infinity terminated at both ends, which is Nonſence as before. *Again*, Infinite paſt Generations of Men have been once actually preſent: there may be ſome one Man ſuppoſe then, that was at infinite diſtance from Us now: therefore that man's Son likewiſe, forty years younger ſuppoſe than his Father, was either at infinite diſtance from Us or at finite: if that Son too was at infinite diſtance from Us, then one Infinite is longer by forty years than another; which is abſurd: if at finite, then forty years added to finite makes it infinite, which is as abſurd as the other. And *again*, The number of Men that are already dead and gone is infinite, as they ſay: but the

the number of the Eyes of thoſe Men muſt neceſſarily be twice as much as that of the Men themſelves, and that of the Fingers ten times as much, and that of the Hairs of their Heads thouſands of times. So that we have here one Infinite number twice, ten times, and thouſands of times as great as another, which is contradiction again. Thus we ſee it is impoſſible in it ſelf, that any ſucceſſive duration ſhould be actually and poſitively infinite, or have infinite ſucceſſions already gone and paſt. Neither can theſe Difficulties be applied to the Eternal Duration of God Almighty. For though we cannot comprehend Eternity and Infinity; yet we underſtand what they are Not. And ſomething, we are ſure, muſt have Exiſted from all Eternity; becauſe all things could not emerge and ſtart out of Nothing. So that if this præ-exiſtent Eternity is not compatible with a ſucceſſive Duration, as we clearly and diſtinctly perceive that it is not; then it remains, that ſome Being, though infinitely above our finite comprehenſions, muſt have an identical, invariable Continuance from all Eternity; which Being is no other than God. For as his Nature is perfect and immutable without the *leaſt ſhadow of change*; ſo his Eternal Duration is permanent and indiviſible, not meaſurable by Time and Motion, nor to be computed by number

number of ſucceſſive Moments. *One day with the Lord is as a thouſand years, and a thouſand years as one day.*

And *Secondly*, this Opinion of infinite Generations is repugnant likewiſe to matter of Fact. 'Tis a Truth beyond oppoſition, that the univerſal Species of Mankind hath had a gradual increaſe, notwithſtanding what War, and Famine, and Peſtilence, and Floods, and Conflagrations, and the Religious Profeſſion of Celibacy, and other Cauſes, may at certain periods of time have interrupted and retarded it. This is manifeſt from the Hiſtory of the Jewiſh Nation, from the account of the Roman *Cenſus*, and Regiſters of our own Country, where the proportion of Births to Burials is found upon obſervation to be yearly as Fifty to Forty. Now if Mankind do increaſe though never ſo ſlowly, but one Couple ſuppoſe in an Age; 'tis enough to evince the falſhood of Infinite Generations already expired. For though an Atheiſt ſhould contend, that there were ten thouſand million couple of Mankind now in being, (that we may allow him multitude enough) 'tis but going back ſo many Ages, and we deſcend to a ſingle Original Pair. And 'tis all one in reſpect of Eternal Duration yet behind, whether we begin the world ſo many millions of Ages ago, or date it from the late *Æra* of about

Vide *Obſervations upon the Bills of Mortality.*

about Six Thouſand years. And moreover this recent beginning of the World is further eſtabliſhed from the known Original of Empires and Kingdoms, and the Invention of Arts and Sciences: whereas if infinite Ages of Mankind had already preceded, there could nothing have been left to be invented or improved by the ſucceſsfull induſtry and curioſity of our own. The Circulation of the Blood, and the Weight and Spring of the Air (which is as it were the Vital Pulſe and the great Circulation of Nature, and of more importance in all Phyſiology, than any one Invention ſince the beginning of Science) had never lain hid ſo many myriads of Generations, and been reſerved for a late happy Diſcovery by two great Luminaries of this Iſland. I know the Atheiſt may endeavour to evade this by ſuppoſing, That though Mankind have been from everlaſting, and have perpetually encreas'd by generation; yet at certain great periods there may be univerſal Deluges, which may not wholly extinguiſh Mankind (for, they'll ſay, there is not Water enough in Nature for that) but may cover the Earth to ſuch a Height, that none but a few Mountainers may eſcape, enough to continue Humane Race; and yet being illiterate Ruſticks (as Mountainers always are) they can preſerve no Memoirs of former times, nor propagate any Sciences or Arts;

Arts; and ſo the world muſt needs be thought by Poſterity to have begun at ſuch periods. But to this I anſwer, *Firſt*, That upon this ſuppoſition there muſt have been infinite Deluges already paſt: for if ever this Atheiſt admits of a firſt Deluge, he is in the ſame nooſe that he was. For then he muſt aſſert, That there were infinite generations and an infinite increaſe of Mankind before that firſt Deluge; and then the Earth could not receive them, but the infinite Bodies of Men muſt occupy an infinite Space, and then all the Matter of the Univerſe muſt be humane Body; and many other abſurdities will follow, abſurdities as infinite, as the Generations he talks of. But if he ſays, That there have been infinite Deluges heretofore, this is impoſſibility again; for all that I ſaid before againſt the Notion of infinite paſt Generations, is alike applicable to this. *Secondly*, Such Univerſal Deluges (ſince the Deity is now excluded) muſt be produced in a natural way: and therefore gradually, and not in an inſtant: and therefore (becauſe the tops of Mountains, they ſay, are never overflown) the civilized People may eſcape thither out of Villages and Cities; and conſequently, againſt the Atheiſt, Arts, and Sciences, and Hiſtories, may be preſerved, and derived to the ſucceeding World. *Thirdly*, Let us imagine the whole Terraqueous Globe with

with its Atmoſphere about it; What is there here, that can naturally effect an Univerſal Deluge? If you would drown one Country or Continent with Rains and Inundations, you muſt borrow your Vapour and Water from ſome other part of the Globe. You can never overflow all at a time. If the Atmoſphere it ſelf was reduced into Water, (as ſome think it poſſible) it would not make an Orb above 32 foot deep, which would ſoon be ſwallowed up by the cavity of the Sea, and the depreſſed parts of the Earth, and be a very feeble attempt towards an Univerſal Deluge. But then what immenſe Weight is there above, that muſt overcome the expanſive force of the Air, and compreſs it into near the thouſandth part of the room that it now takes up? We, that acknowledge a God Almighty, can give an account of one Deluge, by ſaying it was miraculous; but it would be ſtrange to ſee an Atheiſt have recourſe to a Miracle; and that not once only, but upon infinite occaſions. But perhaps they may endeavour to prove the poſſibility of ſuch a natural Deluge, by borrowing an ingenious Notion, and pretending, That the face of Nature may be now quite changed from what it was; and that formerly the whole Collection of Waters might be an orbicular Abyſs, arched over with an exterior Cruſt or Shell of Earth, and that

the breaking and fall of this Cruſt might naturally make a Deluge. I'll allow the Atheiſt all the fair play in the world. Let us ſuppoſe the Fall of this imaginary Cruſt. *Firſt*, It ſeems to be impoſſible, but that all the Inhabitants of this Cruſt muſt be daſh'd to pieces in its Ruins. So that this very Notion brings us to the neceſſity of a new production of Men; to evade which it is introduced by the Atheiſt. *Again*, If ſuch a Cruſt naturally fell, then it had in its own conſtitution a tendency towards a Fall; that is, it was more likely and inclinable to fall this thouſand years, than the laſt. But if the Cruſt was always gradually nearer and nearer to falling; that plainly evinces, that it had not endured eternally before its Fall. For let them aſſign any imaginable period for its falling, how could it have held out till then (according to the ſuppoſition) the unmeaſurable duration of infinite Ages before? And *again*, ſuch a Cruſt could fall but once; for what Architect can an Atheiſt ſuppoſe, to rebuild a new Arch out of the ruins of the other? But I have ſhewn before that this Atheiſt hath need of infinite Deluges to effect his deſign; and therefore I'll leave him to contrive how to make infinite Cruſts one upon the back of another; and now proceed to examine in the ſecond place, The Aſtrological Explication of the Origin of Men.

II. If

II. If you ask one of this Party, what Evidence he is able to produce for the truth of his Art, he may perhaps offer ſome Phyſical Reaſons for a general influence of the Stars upon terreſtrial bodies: but as Aſtrology is conſider'd to be a Syſtem of Rules and Propoſitions, he will not pretend to give any reaſon of it *à priori*; but reſolves all that into Tradition from the *Chaldeans* and *Ægyptians*, who firſt learnt it by long obſervation, and tranſmitted it down to Poſterity; and that now it is daily confirmed by Events; which are experienced to anſwer the Predictions. This is all that can be ſaid for Aſtrology as an Art. So that the whole Credibility of this Planetary production of Mankind muſt depend upon Obſervation. But are they able to ſhew among all the Remains of the *Chaldaick* Obſervations for Four hundred and ſeventy thouſand years (as they pretended) any Tradition of ſuch a Production? So far from that, that the *Chaldeans* believed the world and mankind to have been from everlaſting, which opinion I have refuted before. Neither can the *Ægyptian* Wizards with their long Catalogue of Dynaſties, and Obſervations for innumerable Years, ſupply the Atheiſts with one inſtance of ſuch a Creation. Where are the fragments of *Petoſiris* and *Necepſo*, that may countenance this Aſſertion? I believe if they had had any example of men born

out of the Soil, they would rather have aſcribed it to the fruitfull Mud of the *Nile* (as they did the breeding of Frogs, and Mice, and Monſters) than to the efficacy of Stars. But with the leave of theſe Fortune-tellers, did the Stars do this feat once only, which gave beginning to Humane Race? or have they frequently done ſo, and may do it again? If frequently, why is not this Rule deliver'd in *Ptolemee* and *Albumazar*? If once only at the beginning, then how came it to be diſcover'd? Who were there then in the world, to obſerve the Births of thoſe Firſt Men, and calculate their Nativities, as they ſprawl'd out of Ditches? Thoſe Sons of Earth were very wiſe Children, if they themſelves knew, that the Stars were their Fathers. Unleſs we are to imagine, that they underſtood the Planets and the Zodiack by inſtinct, and fell to drawing Schemes of their own Horoſcopes, in the ſame Duſt they ſprung out of? For my part I can have no great veneration for *Chaldaick* Antiquity; when I ſee they could not diſcover in ſo many thouſand years, that the Moon was an opake Body, and received her Light from the Sun. But ſuppoſe their Obſervations had been never ſo accurate, it could add

So *Diodorus Siculus*, lib. 1. c 2. Φασὶ τοίνυν Αἰγύπτιοι κατὰ τὴν ἐξ ἀρχῆς τῶν ὅλων γένεσιν πρώτους τοὺς ἀνθρώπους γενέσθαι κατὰ τὴν Αἴγυπτον, διά τε τὴν εὐκρασίαν τῆς χώρας, καὶ διὰ τὴν φύσιν τοῦ Νείλου, &c.

Vitruvius, *lib.* 9. *c.* 4. Lucret. *lib.* 5. *Ut Babylonica Chaldæam doctrina, &c.* Apuleius *de Deo* Socratis: *Seu illa (Luna) proprio & perpeti fulgore, ut Chaldæi arbitrantur, parte luminis compos, parte altera caſſa fulgoris.*

add no Authority to modern Aſtrology, which is borrowed from the *Greeks*. 'Tis well known that *Beroſus*, or his Scholars new modelled and adapted the *Babylonian* Doctrines to the *Græcian* Mythology. The ſuppoſed Influences of *Aries* and *Taurus* for example, have a manifeſt relation to the *Græcian* Stories of the Ram that carried *Phrixus*, and the Bull that carried *Europa*. Now which of theſe is the Copy, and which the Original? Were the Fables taken from the Influences, or the Influences from the Fables? the Poetical Fables more ancient than all Records of Hiſtory; or the Aſtrological Influences, that were not known to the *Greeks* till after *Alexander* the Great? But without queſtion thoſe Fabulous Tales had been many a time told and ſung to lull Children aſleep, before ever *Beroſus* ſet up his Intelligence Office at *Cos*. And the ſame may be ſaid of all the other Conſtellations. Firſt, Poetry had filled the Skies with Aſteriſms and Hiſtories belonging to them; and then Aſtrology deviſes the feigned Virtues and Influences of each, from ſome property of the Image, or Alluſion to the Story. And the ſame trifling futility appears in their XII Signs of the *Zodiack*, and their mutual Relations and Aſpects. Why no more Aſpects than diametrically oppoſite, and ſuch as make æquilateral figures? Why are the Maſculine and Feminine, the Fiery and Airy, and Watry

Watry and Earthly Signs all placed at ſuch regular diſtances? Were the Virtues of the Stars diſpoſed in that order and rank, on purpoſe only to make a pretty Diagram upon Paper? But the Atheiſtical Aſtrologer is doubly preſſed with this abſurdity. For if there was no Counſel at the making of the world, how came the Aſteriſms of the ſame nature and energies to be ſo harmoniouſly placed at regular intervals? And how could all the Stars of one Aſteriſm agree and conſpire together to conſtitute an Univerſal? Why does not every ſingle Star ſhed a ſeparate influence; and have Aſpects with other Stars of their own Conſtellation? But what need there many words? As if the late Diſcoveries of the Celeſtial Bodies had not plainly detected the impoſture of Aſtrology? The Planet *Saturn* is found to have a great Ring that encircles him, and five leſſer Planets that move about him, as the Moon doth about the Earth: and *Jupiter* hath four *Satellites*, which by their Interpoſition between him and us make ſome hundreds of Eclipſes every year. Now the whole Tribe of Aſtrologers, that never dream'd of theſe Planets, have always declared, that when *Jupiter* and *Saturn* come about again to any given Point, they exert (conſider'd ſingly by themſelves) the ſame Influence as before. But 'tis now manifeſt, that when either of them return to the ſame

ſame point; the Planets about them, that muſt make up an united Influence with them, have a different ſituation in reſpect of us and each other, from what they had the time before: and conſequently the joint Influence muſt be perpetually varied, and never be reducible to any Rules and Obſervations. Or if the Influences be conveyed hither diſtinct, yet ſometimes ſome of the Little Planets will eclipſe the Great one at any given point; and by that means intercept and obſtruct the Influence. I cannot now inſiſt on many other Arguments deducible from the late Improvements of Aſtronomy, and the truth of the *Copernican* Syſtem; For if the Earth be not the Centre of the Planetary Motions, what muſt become then of the preſent Aſtrology, which is wholly adapted to that vulgar *Hypotheſis*? And yet nevertheleſs, when they lay under ſuch wretched miſtakes for many Myriads of Years, if we are willing to believe them; they would all along, as now, appeal to Experience and Event for the confirmation of their Doctrines. That's the invincible Demonſtration of the Verity of the Science: And indeed as to their Predictions, I think our Aſtrologers may aſſume to themſelves that infallible Oracle of *Tireſias*,

O Laertiade, quicquid dico, aut erit, aut non.

There's

There's but a true and a falſe in any telling of Fortune; and a man that never hits on the right ſide, cannot be called a bad Gueſſer, but muſt miſs out of deſign, and be notably skilfull at lighting on the wrong. And were there not formerly as great pretentions to it from the ſuperſtitious Obſervation of the Entrails of Cows, of the flying of Vulturs, and the pecking of Chickings? Nay, the old *Augurs* and *Soothſayers* had better reaſon to profeſs the Art of Divining, than the modern Aſtrological Atheiſt: for they ſuppoſed there were ſome *Dæmons*, that directed the Indications. So likewiſe the *Chaldean* and *Ægyptian* Aſtrologers were much more excuſable than He. It was the Religion of their Countries to worſhip the Stars, as we know from unqueſtionable Authority. They believed them Intelligent Beings, and no other than very Gods; and therefore had ſome Reaſon to ſuſpect, that they might govern Humane Affairs. The Influence of the Stars was in their apprehenſions no leſs than Divine Power. But an Atheiſt, that believes the Planets to be dark, ſolid and ſenſeleſs Bodies, like the brute Earth he treads on; and the Fixt Stars and the Sun to be inanimate Balls of Fire; what Reaſons can He advance for the Credit of ſuch Influences? He acknowledgeth nothing beſides

Maimonides More Nevochim *De Zabiis & Chaldæis*. Plato *in* Cratylo. Diodorus, *lib.* 1 *c.* 2. Euſebius *Demonſt. Evangel. lib.* 1. *c.* 6. Φοίνικας τοιγαρῶν καὶ Αἰγυπτίους πρώτους ἁπάντων κατέχει λόγος ἥλιον καὶ σελήνην καὶ ἀστέρας σὺν ἀπορροίαις.

beſides Matter and Motion; ſo that all that he can conceive to be tranſmitted hither from the Stars, muſt needs be perform'd either by Mechaniſm or Accident; either of which is wholly unaccountable, and the latter irreconcileable to any Art or Syſtem of Science. But if both were allowed the Atheiſt; yet as to any production of Mankind, they will be again refuted in my following Diſcourſe. I can preſerve a due eſteem for ſome great Men of the laſt Age, before the Mechanical Philoſophy was revived, though they were too much addicted to this nugatory Art. When Occult Quality, and Sympathy and Antipathy were admitted for ſatisfactory Explications of things, even wiſe and vertuous Men might ſwallow down any Opinion that was countenanced by Antiquity. But at this time of day, when all the general powers and capacities of Matter are ſo clearly underſtood; he muſt be very ridiculous himſelf, that doth not deride and explode the antiquated Folly. But we may ſee the miſerable Shifts that ſome men are put to; when that which was firſt founded upon, and afterward ſupported by *Idolatry*, is now become the tottering Sanctuary of *Atheiſm*. If the Stars be no Deities, Aſtrology is groundleſs: and if the Stars be Deities, why is the Aſtrologer an Atheiſt? He may eaſily be no Chriſtian; and 'tis difficult indeed to be both

at once: becauſe, as I have ſaid before, Idolatry is at the bottom; and by ſubmitting Humane Actions and Inclinations to the Influence of the Stars, they deſtroy the very Eſſence of Moral Virtue and the Efficacy of Divine Grace: and therefore Aſtrology was juſtly condemn'd by the Ancient Fathers and Chriſtian Emperours. An Aſtrologer, I ſay, may very eaſily be no Chriſtian; he may be an Idolater or a Pagan: but I could hardly think Aſtrology to be compatible with rank Atheiſm; if I could ſuppoſe any great gifts of Nature to be in that perſon, who is either an Atheiſt or an Aſtrologer. But let him be what he will, he is not able to do much hurt by his Reaſons and Example. For Religion it ſelf, according to his Principles, is derived from the Stars. And he owns, 'tis not any juſt Exceptions he hath taken againſt Chriſtianity, but 'tis his Deſtiny and Fate; 'tis *Saturn* in the Ninth Houſe, and not Judgment and Deliberation, that made him an Atheiſt.

Concil. Laod. *Can.* 36 Conc. 6. in Trullo. *Can* 61. Cod Juſt. *lib.* 9. *tit.* 18. Cod. Theodoſ. *l.* 9. *tit.* 16. Βασιλικῶν *lib.* 60. *tit.* 39.

A CONFUTATION OF ATHEISM FROM THE *Structure and Origin of Humane Bodies.*

PART II.

The *Fourth* SERMON preached *June* 6. 1692.

Acts XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him; though he be not far from every one of us: for in him we Live, and Move, and have our Being.

IN the former part of this Enquiry I have examin'd and refuted two Atheiſtical Notions oppoſed to the great Doctrine of the Text, *That we owe our Living and Being to the power of God*: The one of the *Ariſtotelian* Atheiſts, who, to

avoid the difficulties of the firſt production of Mankind, without the intervention of Almighty Wiſdom and Power, will have the Race to have thus continued without beginning, by an eternal ſucceſſion of infinite paſt Generations; which Aſſertion hath been detected to be mere nonſenſe, and contradictory to it ſelf: The other of the Aſtrological undertakers, that would raiſe Men like Vegetables out of ſome fat and ſlimy ſoil well digeſted by the kindly heat of the Sun, and impregnated with the influence of the Stars upon ſome remarkable and periodical conjunctions: Which opinion hath been vamp'd up of late by *Cardan* and *Ceſalpinus*, and other News-mongers from the Skies; a Pretence as groundleſs and ſilly, as the dreaming Oneirocriticks of *Artemidorus* and *Aſtrampſychus*, or the modern Chiromancy and Divinations of Gypſies.

I proceed now to the two remaining Paradoxes of ſuch Sects of Atheiſts, as laying aſide Aſtrology and the unintelligible Influence of Heavenly Bodies, except that which proceeds from their Gravity and Heat, and Light, do either produce Mankind mechanically and neceſſarily from certain connexions of Natural Cauſes; or more dully and ſupinely, though altogether as reaſonably, reſolve the whole Buſineſs into the unaccountable ſhuffles and tumults of Matter, which they call Chance and Accident.

But

But at preſent I ſhall only take an account of the ſuppoſed Production of Humane Bodies by Mechaniſm and Neceſſity.

The Mechanical or Corpuſcular Philoſophy, though peradventure the oldeſt, as well as the beſt in the world, had lain buried for many Ages in contempt and oblivion; till it was happily reſtor'd and cultivated anew by ſome excellent Wits of the preſent Age. But it principally owes its re-eſtabliſhment and luſtre, to Mr. *Boyle* that Honourable Perſon of ever Bleſſed Memory, who hath not only ſhewn its uſefulneſs in Phyſiology above the vulgar Doctrines of Real Qualities and Subſtantial Forms; but likewiſe its great ſerviceableneſs to Religion it ſelf. And I think it hath been competently prov'd in a former Diſcourſe, how friendly it is to the Immateriality of Humane Souls, and conſequently to the Exiſtence of a Supreme Spiritual Being. And I may have occaſion hereafter to ſhew further, that all the Powers of Mechaniſm are intirely dependent on the Deity, and do afford a ſolid Argument for the Reality of his Nature. So far am I from the apprehenſion of any great feats, that this Mechanical Atheiſt can do againſt Religion. For if we conſider the Phænomena of the Material World with a due and ſerious attention, we ſhall plainly perceive, that its preſent frame and conſtitution and the

the eſtabliſhed Laws of Nature are conſtituted and preſerved by Gravitation alone. That is the powerfull cement, which holds together this magnificent ſtructure of the world; *Which ſtretcheth the North over the empty ſpace, and hangeth the Earth upon Nothing*; if we may transfer the words of *Job* from the firſt and real Cauſe to the ſecondary Agent. Without Gravity, the whole Univerſe, if we ſuppoſe an undetermin'd power of Motion infuſed into Matter, would have been a confuſed Chaos, without beauty or order, and never ſtable and permanent in any condition. Now it may be prov'd in its due place, that this Gravity, the great Baſis of all Mechaniſm, is not it ſelf Mechanical; but the immediate *Fiat* and Finger of God, and the Execution of the Divine Law; and that Bodies have not the power of tending towards a Centre, either from other Bodies or from themſelves: which at once, if it be proved, will undermine and ruine all the Towers and Batteries that the Atheiſts have raiſed againſt Heaven. For if no Compound Body in the viſible world can ſubſiſt and continue without Gravity, and if Gravity do immediately flow from a Divine Power and Energy; it will avail them nothing, though they ſhould be able to explain all the particular Effects, even the Origination of Animals, by mechanical principles. But however at preſent I will forbear

Job 26. 7.

forbear to urge this againſt the Atheiſt. For, though I ſhould allow him, that this Catholick Principle of Gravitation is eſſential to Matter without introducing a God; yet I will defie him to ſhew, how a Humane Body could be at firſt produced naturally, according to the preſent Syſtem of things, and the mechanical affections of Matter.

And becauſe this Atheiſt profeſſeth to believe as much as we; that the firſt production of Mankind was in a quite different manner from the preſent and ordinary method of Nature, and yet affirms nevertheleſs, that That was Natural too; which ſeems at the firſt ſight to be little leſs than a contradiction: It ſhould lie upon him to make out, how matter by undirected Motion could at firſt neceſſarily fall, without ever Erring or Miſcarrying, into ſuch a curious formation of Humane Bodies; a thing that by his own confeſſion it was never able to do ſince, or at leaſt hath not done for ſome thouſands of years: he ſhould declare to us what ſhape and contexture Matter then had, which it cannot have now: how it came to be altered by long courſe of time, ſo that living Men can no longer be produced out of putrefaction in the primary way; and yet the ſpecies of Mankind, that now conſiſts of and is nouriſhed by Matter ſo altered, ſhould continue to be the ſame as it was from the beginning. He ſhould undertake

dertake to explain to us the firſt ſteps and the whole progreſs of ſuch a formation; at leaſt by way of *Hypotheſis*, how it naturally might have been, tho' he affirm not that it was actually ſo. Whether he hath a new Notion peculiar to himſelf about that Production, or takes up with ſome old one, that is ready at hand: whether that moſt witty Conceit of *Anaximander*, That the firſt Men and all Animals were bred in ſome warm moiſture, incloſed in cruſtaceous skins, as if they were various kinds of Crab-fiſh and Lobſters; and ſo continued till they arrived at perfect age; when their ſhelly Priſons growing dry and breaking made way for their liberty: or the no leſs ingenious opinion of the great *Empedocles*; That Mother Earth firſt brought forth vaſt numbers of Legs, and Arms, and Heads, and the other members of the Body, ſcatter'd and diſtinct, and all at their full growth; which coming together and cementing (as the pieces of Snakes and Lizards are ſaid to do, if one cuts them aſunder) and ſo configuring themſelves into Humane ſhape, made luſty proper Men of thirty years age in an inſtant: or rather the divine Doctrine of *Epicurus* and the *Ægyptians*; That there firſt grew up a ſort of Wombs, that had their Roots in the Earth, and attracted thence a kind of Milk for the nouriſhment of the incloſed *Fœtus*; which at the time of maturity

Plutarch. *de Plac. Phi.* lib. 5. c. 19. & *Sympoſ.* l. 8. c. 8. Cenſorinus *de die Natali* cap. 4.

Plutarch. *de Plac. Phil.* 5. 19. Cenſorin. *ibidem.*

Cenſorinus. *ibid.* Lucret. lib. 5. Diodorus Siculus, *lib.* 1. *c.* 2.

rity broke through thoſe Membranes, and ſhifted for themſelves. I ſay, he ought to acquaint us which of theſe he is for, or bring a new explication of his own; and not require Us to prove the Negative, That a Spontaneous production of Mankind, neither warranted by example, nor defended by reaſon, nevertheleſs may not *poſſibly* have been true. This is a very unreaſonable demand, and we might juſtly put him off with ſuch an anſwer as this; That there are ſeveral things, which all men in their wits do disbelieve, and yet none but madmen will go about to disprove. But to ſhew him how much we endeavour to ſatisfie and oblige him, I will venture once for his ſake to incurr the cenſure of ſome perſons for being elaborately trifling. For with reſpect to the moſt of Mankind, ſuch wretched abſurdities are more wiſely contemn'd than confuted; and to give them a ſerious anſwer, may only make them look more conſiderable.

Firſt then, I take it for granted by him, That there were the ſame Laws of Motion, and the like general Fabrick of the Earth, Sea and Atmoſphere, at the beginning of Mankind, as there are at this day. For if any Laws at firſt were once ſettled and conſtituted; like thoſe of the *Medes* and *Perſians*, they are never to be reverſed. To violate and infringe them, is the ſame as what we call Miracle;

and doth not ſound very Philoſophically out of the mouth of an Atheiſt. He muſt allow therefore, that Bodies were endowed with the ſame affections and tendencies then as ever ſince, and that if an *Ax-*
2 K. 5. 6. *head* be ſuppoſed to float upon water, which is ſpecifically much lighter than it; it had been ſupernatural at that time, as well as in the days of *Eliſha*. And this is all that I deſire him to acknowledge at preſent. So that he may admit of thoſe Arguments as valid and concluſive againſt his *Hypotheſis*, that are fairly drawn from the preſent powers of Matter, and the viſible conſtitution of the World.

Now that we may come to the point; All Matter is either Fluid or Solid, in a large acceptation of the words, that they may comprehend even all the middle degrees between extreme Fixedneſs and Coherency, and the moſt rapid inteſtine motion of the Particles of Bodies. Now the moſt cavilling Atheiſt muſt allow, that a ſolid inanimate Body, while it remains in that ſtate, where there is none, or a very ſmall and inconſiderable change of Texture, is wholly incapable of a vital production. So that the firſt Humane Body, without Parents and without Creator, if ſuch an one ever was, muſt have naturally been produced in and conſtituted by a Fluid. And becauſe this Atheiſt goes mechanically to work; the univerſal Laws of Fluids muſt have been rigidly

rigidly obſerved during the whole proceſs of the Formation. Now this is a Catholick Rule of Staticks; That if any Body be bulk for bulk heavier than a Fluid, it will ſink to the bottom of that Fluid; and if lighter, it will float upon it; having part of it ſelf extant, and part immerſed to ſuch a determinate depth, as that ſo much of the Fluid as is equal in Bulk to the immerſed part, be equal in Gravity to the whole. And conſequently if ſeveral portions of one and the ſame Fluid have a different ſpecifick gravity, the heavier will always (in a free veſſel) be gradually the lower; unleſs violently ſhaken and blended together by external concuſſion. But that cannot be in our preſent caſe. For I am unwilling to affront this Atheiſt ſo much, as to ſuppoſe him to believe, that the firſt organical Body might poſſibly be effected in ſome Fluid portion of Matter, while its Heterogeneous parts were jumbled and confounded together by a Storm, or Hurricane, or Earthquake. To be ſure he will rather have the primitive Man to be produced by a long proceſs in a kind of digeſting *Balneum*, where all the heavier Lees may have time to ſubſide, and a due *Æquilibrium* be maintain'd, not diſturb'd by any ſuch rude and violent ſhocks, that would ruffle and break all the little *Stamina* of the *Embryon*, if it were a making before. Now becauſe all the parts

Archimedes *de Inſidentibus humido, lib.* 1. Stevin *des Elements Hydroſtatiques.*

of an undiſturb'd Fluid are either of equal Gravity, or gradually placed and ſtoried according to the differences of it; any concretion that can be ſuppoſed to be naturally and mechanically made in ſuch a Fluid, muſt have a like ſtructure of its ſeveral parts; that is, either be all over of a ſimilar Gravity, or have the more ponderous parts nearer to its Baſis. But there need no more conceſſions than this, to extinguiſh theſe ſuppoſed Firſt-born of Nature in their very formation. For ſuppoſe a Humane Body to be a forming in ſuch a Fluid in any imaginable poſture, it will never be reconcileable to this Hydroſtatical Law. There will be always ſomething lighter beneath, and ſomething heavier above; becauſe Bone, or what is then the Stuff and Rudiments of Bone, the heavieſt *in ſpecie*, will be ever in the midſt. Now what can make the heavier particles of Bone aſcend above the lighter ones of Fleſh, or depreſs theſe below thoſe, againſt the tendency of their own Nature? This would be wholly as miraculous, as the ſwimming of Iron in Water at the command of *Eliſha*, and as impoſſible to be, as that the Lead of an Edifice ſhould naturally and ſpontaneouſly mount up to the Roof, while lighter materials employ themſelves beneath it: or that a Statue, like that in *Nebuchadnezzar*'s Viſion, whoſe Head was of fine and moſt ponderous Gold, and his Feet of lighter

ter materials, Iron and Clay, ſhould mechanically erect it ſelf upon them for its Baſis.

Secondly, Becauſe this Atheiſt goes mechanically to work, he will not offer to affirm, That all the parts of the *Embryon* could according to his explication be formed at a time. This would be a ſupernatural thing, and an effectual refutation of his own Principles. For the Corpuſcles of Matter having no conſciouſneſs of one anothers acting (at leaſt before or during the Formation; as will be allowed by that very Atheiſt, that attributes Reaſon and Perception to them, when the Formation is finiſhed) they could not conſent and make a compact together, to carry on the work in ſeveral places at once; and one party of them be forming the Brain, while another is modelling the Heart, and a third delineating the Veins. No, there muſt be, according to Mechaniſm, a ſucceſſive and gradual operation: Some few Particles muſt firſt be united together, and ſo by appoſition and mutual connexion ſtill more and more by degrees, till the whole Syſtem be completed: and a Fermentation muſt be excited in ſome aſſignable place, which may expand it ſelf by its Elaſtical power; and break through, where it meets with the weakeſt reſiſtance; and ſo by that ſo ſimple and mechanical action, may excavate all the various Ducts and Ventricles of the Body. This

is

is the only general account, as mean as it appears to be, that this Machin of an Atheiſt can give of that *fearfull and wonderfull* Production. Now to confute theſe Pretences, *Firſt*, There is that viſible Harmony and Symmetry in a Humane Body, ſuch a mutual communication of every veſſel and member of it, as gives an internal evidence; that it was not formed ſucceſſively, and patch'd up by piecemeal. So uniform and orderly a ſyſtem with innumerable Motions and Functions, all ſo placed and conſtituted, as never to interfere and claſh one with another, and diſturb the Oeconomy of the whole, muſt needs be aſcribed to an Intelligent Artiſt; and to ſuch an Artiſt, as did not begin the matter unprepared and at a venture; and, when he was put to a ſtand, pauſed and heſitated, which way he ſhould proceed; but he had firſt in his comprehenſive Intellect a complete *Idea* and Model of the whole Organical Body, before he enter'd upon the Work. But *Secondly*, if they affirm, That mere Matter by its mechanical Affections, without any deſign or direction, could form the Body by ſteps and degrees; what member then do they pitch upon for the foundation and cauſe of all the reſt? Let them ſhew us the beginning of this Circle; and the firſt Wheel of this Perpetual Motion. Did the Blood firſt exiſt, antecedent to the formation of the Heart?

But

But that is to ſet the Effect before the Cauſe: becauſe all the Blood that we know of, is made in and by the Heart, having the quite different form and qualities of Chyle, before it comes thither. Muſt the Heart then have been formed and conſtituted, before the Blood was in being? But here again, the Subſtance of the Heart it ſelf is moſt certainly made and nouriſhed by the Blood, which is conveyed to it by the Coronary Arteries. And thus it is through the whole ſyſtem of the Body; every member doth mutually ſuſtain and ſupply one another; and all are coætaneous, becauſe none of them can ſubſiſt alone. But they will ſay, That a little Ferment firſt making a Cavity, which became the left Ventricle of the Heart, did thence further expand it ſelf, and thereby delineate all the Arteries of the Body. Now if ſuch a ſlight and ſorry buſineſs as that, could produce an Organical Body; one might reaſonably expect, that now and then a dead lump of Dough might be leaven'd into an Animal: for there a like Ferment makes notable Tumours and Ventricles; beſides ſundry long and ſmall Chanels, which may paſs tolerably well for Arteries and Veins. But I pray, in this ſuppoſed Mechanical Formation, when the Ferment was expanded to the extremities of the Arteries, if it ſtill had any elaſtical force remaining, why did it not go on and break through

Carteſius *de Formatione Fœtûs.*

through the Receptacle, as other Ferment muſt be allowed to have done at the Mouth and the Noſtrils? There was as yet no membranous Skin formed, that might ſtop and repell it. Or if the force of it was ſpent, and did not wheel about and return; what mechanical cauſe then ſhall we aſſign for the Veins? for this Ferment is there ſuppoſed to have proceeded from the ſmall capillary extremities of them to the Great Vein and the Heart; otherwiſe it made Valves, which would have ſtopp'd its own paſſage. And why did that Ferment, that at firſt diſperſed it ſelf from the Great Artery into infinite little ramifications, take a quite contrary method in the making of the Veins, where innumerable little Rivulets have their confluence into the Great Vein, the common chanel of the Blood? Are ſuch oppoſite motions both equally mechanical, when in both caſes the Matter was under the ſame modification? And *again*, When the firſt Ferment is excited, and forms the left Ventricle of the Heart; if the Fluid Matter be uniform and of a ſimilar texture, and therefore on all ſides equally reſiſt the Expanſion; then the Cavity muſt continue One, dilated more and more, 'till the expanſive force and the uniform reſiſtance be reduced to an equality, and ſo nothing at all can be formed by this Ferment, but a ſingle round Bubble. And moreover this Bubble

(if

(if that could make a Heart) by reaſon of its comparative Levity to the Fluid that incloſes it, would neceſſarily aſcend to the top; and conſequently we ſhould never find the Heart in the midſt of the Breaſt. But if the Fluid be ſuppoſed to conſiſt of Heterogeneous Particles, then we cannot conceive how thoſe diſſimilar parts ſhould have a like ſituation in two ſeveral Fluids, when the Ferment begins. So that upon this ſuppoſition there could be no Species of Animals, nor any Similitude between them: One would have its Lungs, where another hath its Liver, and all the other Members prepoſterouſly placed; there could not be a like Configuration of Parts in any two Individuals. And *again*, What is that which determines the Growth of all living Creatures? What principles of Mechaniſm are ſufficient to explain it? Why do not all Animals continually increaſe in bigneſs during the whole ſpace of their Lives, as it is reported of the Crocodile? What ſets a bound to their ſtature and dimenſions? Or if we ſuppoſe a Bound and *Ne plus ultra* to be mechanically fixed: but then why ſo great a variety in the Bulk of the ſeveral Kinds? why alſo ſuch Conſtancy obſerved in that manifold Variety? For as ſome of the largeſt Trees have Seeds no bigger or even leſs than ſome diminutive Plants, and yet every Seed is a perfect Plant with

Trunk and Branches and Leaves incloſed in a Shell: So the firſt *Embryon* of an Ant is ſuppoſed by inquiſitive Naturaliſts to be as big, as that of an Elephant, and to promiſe as fair at its primitive Formation for as ſpacious a Body: which nevertheleſs by an immutable Decree can never arrive to the millionth part of the others Bulk. And what modification of the firſt liquid Matter can vary ſo much, as to make one Embryon capable of ſo prodigiouſly vaſt augmentation, while another is confined to the minuteneſs of an Inſect? Is not this manifeſtly a Divine Sanction, that hath fixed and determin'd the Shape, the Stature, the Appetites, and the Duration of all Creatures in the World? Hither muſt we have recourſe in that great and myſterious Affair of an Organical Formation: And I profeſs that I cannot diſcern one ſtep in the whole, that is agreeable to the natural Laws of Motion. If we conſider the Heart, which is ſuppoſed to be the firſt principle of Motion and Life, and divide it by our Imagination into its conſtituent Parts, its Arteries and Veins and Nerves and Tendons and Membranes, and innumerable little Fibres, that theſe Secondary Parts do conſiſt of; we ſhall find nothing here Singular, but what is in any other Muſcle of the Body. 'Tis only the Site and Poſture of theſe ſeveral Parts and the Configuration of the whole, that

Swammerdam *Hiſtor. Inſect. p.* 3.

that give it the Form and Functions of a Heart. Now why ſhould the firſt ſingle Fibres in the Formation of the Heart be peculiarly drawn in Spiral Lines; when the Fibres of all other Muſcles are made by a tranſverſe rectilinear Motion? What could determine the Fluid Matter into that odd and ſingular Figure, when as yet no other Member is ſuppoſed to be form'd, that might direct the Courſe of that Fluid Matter? Let Mechaniſm here make an Experiment of its Power, and produce a ſpiral and turbinated motion of the whole moved Body without an external Director. When all the Organs are once framed by a ſupernatural and divine Principle, we do willingly admit of Mechaniſm in many Functions of the Body: but that the Organs themſelves ſhould be mechanically formed, we conceive it to be impoſſible and utterly inexplicable. And if any Atheiſt will give a clear and philoſophical account of the things that are here touch'd upon; he may then hear of many more and perhaps more difficult than theſe, which their unfitneſs for a popular Auditory, and the remaining parts of my Subject, that preſs forward to be treated of, oblige me now to omit.

But as the Atheiſt, when he is put to it to explain, How any Motion of dead Matter can beget Thought and Perception, will endeavour to defend

his baffled Impiety with the inſtance of Brutes, which he calls Thinking Machines: ſo will he now alſo appeal from the Arbitration of Reaſon in the Caſe of Animal Productions, to Example and Matter of Fact. He will declaim to us about the admirable Structure of the Bodies of Inſects; that they have all the Vital Parts, which the largeſt of Quadrupeds and even Man himſelf can boaſt of; and yet they are the eaſie and obvious Products of unintelligent Nature, that ſpontaneouſly and mechanically form them out of putrefied Carcaſſes and the warm moiſture of the Soil: and (which is mightily to his purpoſe) theſe Inſects, ſo begotten without Parents, have nevertheleſs fit Organs of Generation and Difference of Sex, and can propagate their own kinds, as if themſelves had been begotten ſo too: and that if Mother Earth in this her barrenneſs and decrepitneſs of Age can procreate ſuch ſwarms of curious Engins, which not only themſelves enjoy their portion of Life, but by a moſt wonderfull Inſtinct impart it to many more, and continue their Species: might ſhe not in the flower of her Youth, while ſhe was ſucculent and fertil, have produced Horſes and Elephants and even Mankind it ſelf, the largeſt and perfecteſt Animals, as eaſily as in this parched and ſteril condition ſhe can make a Frog or an Inſect? Thus he thinks,

thinks, he hath made out from Example and Analogy, that at the Beginning of things every Species of Animals might ſpring mechanically out of the Soil without an Intelligent Creator. And indeed there is no one thing in the World, which hath given ſo much Countenance and Shadow of Poſſibility to the Notion of Atheiſm, as this unfortunate miſtake about the æquivocal generation of Inſects: And as the oldeſt Remains of Atheiſtical Writings are full of this Compariſon; ſo it is the main refuge of thoſe, that in this and the laſt Age have had the Folly and Impudence to appear in ſo wretched a Cauſe.

Now to this laſt Subterfuge of the Mechanical Atheiſts we can occurr ſeveral ways. And at preſent we affirm, *Firſt*, *ex abundanti*, That though we ſhould allow them the ſpontaneous production of ſome minute Animals, yet a like primitive Origination of Mankind could not thence be concluded. Becauſe they firſt tacitly ſuppoſe, that there is an univerſal decay of Moiſture and Fertility in the Earth. And they cannot avoid the neceſſity of ſo doing: For if the Soil be as fruitfull now, as it was in the beginning; why would it not produce Men, and the nobler kinds of Beaſts in our days too, if ever it did ſo? So that if that ſuppoſition be evinc'd to be erroneous and groundleſs, all the Arguments

that

that they build upon it, will be ſubverted at once. Now what more eaſily refuted, than that old vulgar Aſſertion of an univerſal Drought and Exſiccation of the Earth? As if the Sun could evaporate the leaſt drop of its Moiſture, ſo that it ſhould never deſcend again, but be attracted and elevated quite out of the Atmoſphere? 'Tis now a matter agreed and allowed by all competent Judges, that every Particle of Matter is endowed with a Principle of Gravity, whereby it would deſcend to the Centre, if it were not repelled upwards by heavier bodies. So that the ſmalleſt Corpuſcle of Vapour, if we ſuppoſe it to be exhaled to the top of the Atmoſphere, thence it muſt come down again, or at leaſt muſt there remain incumbent upon others: for there's either Nothing or nothing heavier above it to protrude it any higher, neither can it ſpontaneouſly mount any more againſt the tendency of its nature. And leſt ſome ignorant Atheiſt ſhould ſuſpect, that peradventure there may be no ſuch Top of the Atmoſphere; but that it may be continued on to the Sun or to indefinite Space: he muſt vouchſafe to be inſtructed, That the whole weight of any Column of the Atmoſphere, and likewiſe the Specifick gravity of its Baſis are certainly known by many Experiments; and that by this computation (even making allowance for its gradually larger Expanſion, the

the higher we go,) the very top of any Pillar of Air is not One hundred Miles diſtant from the Surface of the Earth. So that hence it is manifeſt, that the whole Terraqueous Globe with its Atmoſphere cannot naturally have loſt the leaſt particle of Moiſture, ſince the foundation of the World. But ſtill they may inſiſt, That although the whole Globe cannot be deprived of any of its Moiſture, yet the habitable Earth may have been perpetually the drier, ſeeing it is aſſiduouſly drained and exhauſted by the Seas. But to this we reply, That the very contrary is demonſtrable; That the longer the World ſhall continue, the moiſter the whole Aggregate of the Land will be. For (to take no notice of the ſupply of its moiſture by Rains and Snow and Dews and Condenſation of Vapours, and perhaps by ſubterraneous paſſages) the tops of Mountains and Hills will be continually waſhed down by the Rains, and the Chanels of Rivers corroded by the Streams; and the Mud that is thereby conveyed into the Sea will raiſe its bottom the higher; and conſequently the Declivity of Rivers will be ſo much the leſs; and therefore the Continents will be the leſs drain'd, and will gradually increaſe in Humidity from the firſt period of their Duration to the final Conſummation of all things: if the ſucceſſive production of Plants and Animals, which are all made up of and nouriſh'd

nouriſh'd by Water, and perhaps never wholly return to Water again, do not keep things at a poiſe; or if the Divine Power do not interpoſe and change the ſettled courſe and order of Nature.

But let us allow their ſuppoſition, That the Total of the dry Land may have been robbed of ſome of its Moiſture which it had at its firſt Conſtitution: yet ſtill there are ſome parts of the Earth ſufficiently ſoak'd and water'd, to produce, Men and Animals now, if ever they did at all. For do not the *Nile*, and the *Niger*, and the *Ganges*, and the *Menam*, make yearly Inundations in our days, as they have formerly done? And are not the Countries ſo overflown ſtill ſituate between the Tropicks under the direct and moſt vigorous Rays of the Sun, the very place where theſe Mechanical Atheiſts lay the Scene of that great Tranſaction? So that if Mankind had ever ſprung naturally out of the Soil, the Experiment would ſucceed now every year in *Æthiopia* and *Siam*; where are all the requiſite qualifications that ever have been, for ſuch a production. And *again*, if there hath been ſuch a gradual diminution of the Generative Faculty of the Earth, that it hath dwindled from nobler Animals to puny Mice and Inſects; why was there not the like decay in the production of Vegetables? We ſhould have loſt by this time the whole Species of Oaks and Cedars

dars and the other tall and lofty Sons of the Foreſt, and have found nothing but dwarfiſh Shrubs and creeping Moſs and deſpicable Muſhroms. Or if they deny the preſent ſpontaneous production of larger Plants, and confine the Earth to as Pigmie Births in the Vegetable Kingdom, as they do in the other: yet ſurely in ſuch a ſuppoſed univerſal decay of Nature, even Mankind it ſelf that is now nouriſhed (though not produced) by the Earth, muſt have degenerated in Stature and Strength in every Generation. And yet we have certain demonſtration from the *Ægyptian* Mummies, and *Roman* Urns and Rings and Meaſures and Ædifices and many other Antiquities, that Humane Stature is not diminiſhed at all for the laſt Two Thouſand years. Now if the Decay has not been conſtant and gradual, there has been no Decay at all; or at leaſt no natural one, nor what may be accounted for by this Mechanical Atheiſt. I conclude therefore, That although we ſhould allow the ſpontaneous production of Inſects; yet no Argument can be deduced from thence for a like Origination of Mankind.

But, *Secondly*, we affirm, That no Inſect or Animal did ever proceed æquivocally from Putrefaction, unleſs in miraculous Caſes, as in *Ægypt* by the Divine Judgments; but all are generated from Parents of their own kind, Male and Female; a Diſ-

covery of that great Importance, that perhaps few Inventions of this Age can pretend to equal Uſefulneſs and Merit; and which alone is ſufficient (if the Vices of Men did not captivate their Reaſon) to explode and exterminate rank Atheiſm out of the World. For if all Animals be propagated by Generation from Parents of their own Species, and there be no inſtance in Nature of even a Gnat or a Mite either now or in former Ages ſpontaneouſly produced: how came there to be ſuch Animals in Being, and whence could they proceed? There is no need of much ſtudy and deliberation about it: for either they have exiſted eternally by infinite Succeſſions already gone and paſt, which is in its very Notion abſurd and impoſſible; or their Origin muſt be aſcribed to a ſupernatural and Divine Power, that formed and created them. Now to prove our aſſertion about the Seminal production of all living Creatures; that we may not repeat the Reaſons which we have offer'd before againſt the firſt Mechanical Formation of Humane Bodies, which are equally valid againſt the ſpontaneous Origin of the minuteſt Inſects; we appeal to Obſervation and Experiment, which carry the ſtrongeſt conviction with them, and make the moſt ſenſible and laſting impreſſions. For whereas it hath been the general Tradition and Belief, that Maggots and Flies breed

See the Former Sermon.

in

in putrefied Carcaſſes, and particularly Bees come from Oxen, and Hornets from Horſes, and Scorpions from Crabfiſh, *&c.* all is now found to be Fable and Miſtake. That ſagacious and learned Naturaliſt *Franciſco Redi* made innumerable trials with the putrid Fleſh of all ſorts of Beaſts and Fowls and Fiſhes and Serpents, with corrupted Cheeſe and Herbs and Fruits and even Inſects themſelves: and he conſtantly found, that all thoſe Kinds of Putrefaction did only afford a Neſt and Aliment for the Eggs and Young of thoſe Inſects that he admitted to come there; but produced no Animal of themſelves by a ſpontaneous Formation. For when he ſuffer'd thoſe things to putrefie in Hermetically ſealed Glaſſes, and Veſſels cloſe cover'd with Paper; and not only ſo, leſt the Excluſion of the Air might be ſuppoſed to hinder the Experiment; but in Veſſels cover'd with fine Lawn, ſo as to admit the Air and keep out the Inſects: no living thing was ever produced there, though he expoſed them to the action of the Sun, in the warm Climate of *Florence*, and in the kindeſt ſeaſon of the year. Even flies cruſh'd and corrupted, when incloſed in ſuch Veſſels, did never procreate a new Fly: though there, if in any caſe, one would have expected that ſucceſs. And when the Veſſels were open, and the Inſects had free acceſs to the Aliment within them, he diligently

Ἵπποι μὲν σφηκῶν γένεσις, πυὸς δὲ μελισσῶν. Nicander.

Redi *De generatione inſectorum.*

obſerved, that no other Species were produced, but of ſuch as he ſaw go in and feed and depoſit their Eggs there: which they would readily do in all Putrefaction; even in a mucilage of bruiſed Spiders, where Worms were ſoon hatch'd out of ſuch Eggs, and quickly changed into Flies of the ſame kind with their Parents. And was not that a ſurprizing Transformation indeed, if according to the vulgar opinion thoſe dead and corrupted Spiders ſpontaneouſly changed into Flies? And thus far we are obliged to the diligence of *Redi*: from whence we may conclude, That no dead Fleſh nor Herbs nor other putrefied Bodies, nor any thing that hath not then actually either a vegetable or animal Life can produce any Inſect. And if we ſhould allow, as he did, that every Animal and Plant doth naturally breed and nouriſh by its ſubſtance ſome peculiar Inſect: yet the Atheiſt could make no advantage of this Conceſſion as to a like Origination of Mankind. For ſurely 'tis beyond even an Atheiſt's Credulity and Impudence, to affirm that the firſt Men might proceed out of the Galls and Tumors of Leaves of Trees, as ſome Maggots and Flies are ſuppoſed to do now; or might grow upon Trees, as the ſtory goes about Barnacles; or perhaps might be the Lice of ſome vaſt prodigious Animals, whoſe Species is now extinct. But though we ſuppoſe

poſe him guilty of ſuch an extravagant folly, he will only ſhift the difficulty, and not wholly remove it; for we ſhall ſtill expect an account of the ſpontaneous Formation of thoſe mountainous kind of Animals and Men-bearing Trees. And as to the Worms that are bred in the Inteſtines and other inward parts of Living Creatures, their production is not material to our preſent enquiry, till ſome Atheiſt do affirm, that his own Anceſtors had ſuch an Original. I ſay, if we ſhould allow this conceſſion of *Redi*, it would do no ſervice to our Adverſaries: but even here alſo they are defeated by the happy curioſity of *Malpighi* and others, who obſerved and diſcovered, That each of thoſe Tumours and Excreſcences of Plants, out of which generally iſſues a Fly or a Worm, are at firſt made by ſuch Inſects, which wound the tender buds with a long hollow Trunk, and depoſit an Egg in the hole with a ſharp corroding liquor, which cauſeth a ſwelling in the leaf, and ſo cloſeth the orifice: and within this Tumor the Worm is hatcht and receives its aliment, till it hath eat its way through. Neither need we recurr to an æquivocal production of Vermin in the *Phthiriaſis* and in *Herod*'s Diſeaſe, who was σκωληκόβρωτος, *eaten of worms*, or maggots. Thoſe horrible diſtempers are always accompanied with putrefying ulcers; and it hath been obſerved by the

Malpighius *de Gallis*, Swammerdam *de gen. Inſect.* Lewenhoeck *Epiſtol.*

Act. 12. 23.

Continuat. Epiſtol. p. 101. the moſt accurate *Lewenhoeck*, that Lice and Flies, which have a moſt wonderfull inſtinct and acuteneſs of ſenſe to find out convenient places for the hatching and nouriſhment of their young, do mightily endeavour to lay their Eggs upon Sores; and that One will lay above a hundred Eggs, and may naturally increaſe to ſome hundreds of thouſands in a quarter of a year: which gives a full and ſatisfactory account of the *Phœnomena* of thoſe Diſeaſes. And whereas it is ſaid, *Exod.* 16. *v.* 20. That ſome of the *Iſraelites left of the Manna until the morning, and it bred worms and ſtank*; which an Atheiſt may make an objection, as either againſt Us, or againſt the truth of the Scriptures: I underſtand it no otherwiſe, than that the Manna was *fly-blown*. It was then the Month of *October*, which in that Southern Climate, after the preceding Autumnal Rains, doth afford a favourable ſeaſon and copious nutriment for infinite ſwarms of Inſects. Neither do I aſcribe it to a miraculous power, that ſome of the Manna ſhould breed worms, but that all the reſt ſhould be preſerved ſound and untainted. And if any one ſhall rigidly urge from that paſſage the literal expreſſion of *breeding*; he muſt allow *Moſes* to ſpeak in the language of the Vulgar in common affairs of life. We do now generally believe the *Copernican* Syſtem; yet I ſuppoſe upon ordinary occaſions we ſhall

ſhall ſtill uſe the popular terms of Sun-riſe and Sun-ſet, and not introduce a new pedantick deſcription of them from the motion of the Earth. And then as to the vulgar opinion, That Frogs are made in the Clouds and brought down by the Rains, it may be thus eaſily refuted: for at that very inſtant, when they are ſuppoſed to deſcend, you may find by diſſection not only their Stomachs full of meat, but their Inteſtines full of excrement: ſo that they had lurked before in the day-time in holes and buſhes and graſs, and were then invited abroad by the freſhneſs of a Shower. And by this time we may underſtand, what credit and authority thoſe old Stories ought to have about monſtrous productions in *Ægypt* after the inundation of the *Nile*, of Mice and Frogs and Serpents, half fleſh and half mud; nay of the Legs, and Arms, and other Limbs of Men, *& quicquid Græcia mendax*; altogether as true, as what is ſeriouſly related by *Helmont*, That foul Linen, ſtopt in a veſſel that hath Wheat in it, will in 21 days time turn the Wheat into Mice: which one may gueſs to have been the philoſophy and information of ſome Houſewife, who had not ſo carefully cover'd her Wheat, but that the Mice could come at it, and were there taken napping, juſt when they had made an end of their cheer. Corn is ſo innocent from this calumny of breeding

Helmont *Imago Fermentat.* &c. p. 92. Edit. 1652.

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of Mice; that it doth not produce the very Weevils that live in it and conſume it: the whole courſe of whoſe generation and periodical changes hath been curiouſly obſerved and deſcribed by the ingenious *Lewenhoek*. And moreover, that we may deprive the Atheiſt of all hopes and pretenſions of Argument from this baffled opinion of æquivocal Inſects, we will acquaint him from the moſt accurate obſervations of *Swammerdam*, That even the ſuppoſed change of Worms into Flies is no real tranſmutation; but that moſt of thoſe Members, which at laſt become viſible to the Eye, are exiſtent at the beginning, artificially complicated together, and cover'd with Membranes and Tunicles, which are afterwards ſtript off and laid aſide: and all the reſt of that proceſs is no more ſurprizing, than the eruption of Horns in ſome Brutes, or of Teeth and Beard in Men at certain periods of age. And as we have eſtabliſh'd our aſſertion of the ſeminal production of all kinds of Animals; ſo likewiſe we affirm, That the meaneſt Plant cannot be rais'd without ſeed by any formative power reſiding in the Soil. To which aſſertion we are encourag'd, *Firſt*, from the known Seeds of all Vegetables, one or two only excepted, that are left to future diſcovery: which Seeds by the help of Microſcopes are all found to be real and perfect Plants, with Leaves and

and Trunk curiouſly folded up and encloſed in the *Cortex*: nay one ſingle grain of Wheat or Barly or Rye, ſhall contain four or five diſtinct Plants under one common Tunicle: a very convincing argument of the Providence and Goodneſs of God; that thoſe Vegetables that were appointed to be the chief ſuſtenance of Mankind, ſhould have that multiplied fœcundity above any others: and *ſecondly*, by that famous experiment of *Malpighi*, who a long time encloſed a quantity of Earth in a veſſel, ſecured by a fine cloth from the ſmall imperceptible ſeeds of Plants that are blown about with the winds; and had this ſucceſs of his Curioſity, to be the firſt happy diſcoverer of this noble and important Truth, That no ſpecies of Plants can be produc'd out of Earth without a præexiſtent ſeed; and conſequently they were all created and raiſed at the beginning of things by the Almighty Gardener, God bleſſed for ever. And *Laſtly*, as to thoſe various and elegant Shells, that are dug up in Continents and embodied in Stones and Rocks at a vaſt diſtance from any Sea; which this Atheiſt may poſſibly allege for an inſtance of a Plaſtick faculty of Nature; 'tis now generally agreed by the moſt diligent Inquirers about them, That they are no ſportfull productions of the Soil, as was formerly believed, but that all did once belong to real and

living Fiſhes; ſince each of them exactly reſembles ſome Shell of the Seas, both in its outward lineaments, and inward texture, and ſpecifick gravity, and all other properties: which therefore are ſo far from being ſubſervient to Atheiſts in their audacious attempts againſt God and Religion, that they rather afford an experimental confirmation of the Univerſal Deluge.

And thus we have competently ſhewn, that every Species of Living Creatures, every ſmall Inſect, and even the Herbs of the Field give a caſting vote againſt Atheiſm, and declare the neceſſity of a ſupernatural Formation. If the Earth in its firſt conſtitution had been left to it ſelf, what horrid deformity and deſolation had for ever overſpread its face? not one living Inhabitant would be found on all its ſpacious ſurface; not ſo much as a Worm in the Bowels of it, nor one ſingle Fiſh in the vaſt Boſom of the Sea; not a Mantle of Graſs or Moſs, to cover and conceal the nakedneſs of Nature. An eternal Sterility muſt have poſſeſſed the World, where all things had been fixed and faſten'd everlaſtingly with the Adamantin chains of Specifick Gravity; if the Almighty had not ſpoken and ſaid, *Let the Earth bring forth Graſs, the Herb yielding Seed, and the Fruit tree yielding Fruit after its kind; and it was ſo.* 'Twas God, that then created

ted the first seminal forms of all Animals and Vegetables, that *commanded the Waters to bring forth abundantly*, and *the Earth to produce Living Creatures after their kind*; that *made Man in his own Image after his own likeness*: that by the efficacy of his first Blessing made *him be fruitfull and multiply and replenish the Earth*; by whose alone power and conservation *we all live and move and have our Being.*

May the same most Glorious God of his infinite mercy grant, that as we *have sought the Lord, and felt after him, and found him* in these works of his Creation: so now that *we have known God, we may glorify him as God* both now, and for evermore. *Amen.*

A CONFUTATION OF ATHEISM FROM THE *Structure and Origin of Humane Bodies.*

The Third and Laſt PART

The *Fifth* SERMON preached *Septemb.* 5. 1692.

Acts XVII. 27.

That they ſhould ſeek the Lord, if haply they might feel after him, and find him; though he be not far from every one of us: for in him we Live, and Move, and have our Being.

IN my former Diſcourſes I have endeavour'd to prove, that Humane Race was neither (1) from Everlaſting without beginning; nor (2) owes its beginning to the Influence of Heavenly Bodies; nor (3) to what they call Nature,

Nature, that is, the neceſſary and mechanical motions of dead ſenſeleſs Matter. I proceed now to examin the fourth and laſt Plea of the Enemies to Religion and their own Souls, That Mankind came accidentally into the World, and hath its Life and Motion and Being by mere *Chance* and *Fortune*.

We need not much wonder, that this laſt Opinion ſhould obtain almoſt univerſally among the Atheiſts of theſe times. For whereas the Other require ſome ſmall ſtock of Philoſophy to underſtand or maintain them: This Account is ſo eaſie and compendious, that it needs none at all; and conſequently is the more proper and agreeable to the great Induſtry and Capacity of the moſt numerous Party of them. For what more eaſie to ſay, than that all the Bodies of the firſt Animals and Plants were ſhuffled into their ſeveral Forms and Structures *fortuitouſly*, that is, theſe Atheiſts know not how, nor will trouble themſelves to endeavour to know? For that is the meaning of Chance; and yet this is all, that they ſay, or can ſay to the great Matter in queſtion. And indeed this little is enough in all reaſon; and could they impoſe on the reſt of Mankind, as eaſily as delude themſelves, with a notion, That *Chance* can effect a thing; it would be the moſt expedite and effectual means to make their Cauſe victorious over Vertue and Religion.

gion. For if you once allow them ſuch an acceptation of Chance, you have precluded your ſelf (they think) from any more reaſoning and objecting againſt them. The Mechanical Atheiſt, though you grant him his Laws of Mechaniſm, is nevertheleſs inextricably puzzled and baffled with the firſt Formation of Animals: for he muſt undertake to determine all the various Motions and Figures and Poſitions and Combinations of his Atoms; and to demonſtrate, that ſuch a quantity of Motion impreſſed upon Particles ſo ſhaped and ſituated, will neceſſarily range and diſpoſe them into the Form and Frame of an Organical Body: an attempt as difficult and unpromiſing of ſucceſs, as if he himſelf ſhould make the Eſſay to produce ſome new Kinds of Animals out of ſuch ſenſeleſs Materials, or to rebuild the moving and living Fabrick out of its duſt in the grave. But the Atheiſt, that we are now to deal with, if you do but concede to him, that Fortune may be an Agent; preſumes himſelf ſafe and invulnerable, ſecure above the reach of any further diſputes. For if you proceed to ask queſtions, and bid him aſſign the proper Cauſes and determinate Manner of that fortuitous Formation, you thereby deny him what you granted before, and take away the very *Hypotheſis* and the Nature of Chance; which ſuppoſeth that no certain Cauſe

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or Manner of it can poſſibly be aſſigned. And as the ſtupidity of ſome Libertines, that demand a ſight of a Spirit or Humane Soul to convince them of its exiſtence, hath been frequently and deſervedly expoſed; becauſe whatſoever may be the object of our Sight, muſt not be a Soul or Spirit, but an opake Body: ſo this Atheiſt would tax us of the like Nonſenſe and Contradiction; if after he hath named to us Fortune or Chance, we ſhould expect from him any particular and diſtinct account of the Origin of Mankind. Becauſe it is the very eſſence and notion of his Chance, to be wholly unaccountable: and if an account could be given of it; it would then no longer be Chance but Mechaniſm, or a neceſſary production of certain Effects from certain Cauſes according to the Univerſal Laws of Motion. Thus we are to know, that if once we admit of Fortune in the Formation of Mankind; there is no further enquiry to be made, no more Difficulties to be ſolved, and no Account to be demanded. And who then can admire, if the inviting eaſineſs and compendiouſneſs of this Aſſertion ſhould ſo dazle the Eyes of our Atheiſt, that he overlooks thoſe groſs Abſurdities, that are ſo conſpicuous in it?

(1) For firſt, if this Atheiſt would have his Chance or Fortune to be a real and ſubſtantial Agent; as the Vulgar ſeem to have commonly apprehended,

prehended, ſome making it a Divinity, others they do not conceive what: he is doubly more ſtupid and more ſupinely ignorant than thoſe Vulgar; in that he aſſumes ſuch a notion of Fortune, as beſides its being erroneous, is inconſiſtent with his Atheiſm. For ſince according to the Atheiſts, the whole Univerſe is *Corpus & mane, Body and nothing elſe*: this Chance, if it do really and phyſically effect any thing, muſt it ſelf be Body alſo. And what a numerous train of Abſurdities do attend ſuch an aſſertion? too viſible and obvious to deſerve to be here inſiſted on. For indeed it is no leſs than flat contradiction to it ſelf. For if this Chance be ſuppoſed to be a Body; it muſt then be a part of the common Maſs of Matter: and conſequently be ſubject to the univerſal and neceſſary Laws of Motion: and therefore it cannot be Chance, but true Mechaniſm and Nature.

(2) But ſecondly, if he forbear to call Chance a real Agent, and is content to have it only a Reſult or Event; ſince all Matter or ſome portion of it may be naturally exempt from theſe ſuppoſed Mechanical Laws, and be endowed with a power of ſpontaneous or fortuitous Motion; which power, when it is exerted, muſt produce an Effect properly Caſual, and therefore might conſtitute the firſt Animate Bodies accidentally, againſt the ſuppoſed natural

natural tendency of the Particles of thoſe Bodies: even this ſecond Aſſertion is contrary to common Senſe, as well as common Obſervation. For how can he conceive, that any parcel of dead Matter can ſpontaneonſly divert and decline it ſelf from the line of its motion without a new impulſe from external Bodies? If it can intrinſically ſtir it ſelf, and either commence its Motion or alter its courſe; it muſt have a principle of ſelf-activity, which is Life and Senſe. But Senſe I have proved formerly to be incompatible with mere Bodies, even thoſe of the moſt compound and elaborate textures; much more with ſingle Atoms or ſolid Particles of Matter, that having no inteſtine motion of Parts are deſtitute of the firſt foundation and capacity of Life. And moreover, though theſe Particles ſhould be ſuppoſed to have this internal principle of Senſe, it would ſtill be repugnant to the notion of Chance: becauſe their Motions would not then be Caſual, but Voluntary; not by Chance, but Choice and Deſign. And *Again*, we appeal to Obſervation, whether any Bodies have ſuch a power of Fortuitous Motion: we ſhould ſurely have experiment of it in the effects of Nature and Art: No Body would retain the ſame conſtant and uniform Weight according to its Bulk and Subſtance; but would vary perpetually, as that ſpontaneous power of Motion

Serm. 2.

ſhould determin its preſent tendency. All the various Machins and Utenſils would now and then play odd Pranks and Capricio's quite contrary to their proper Structures and Deſigns of the Artificers. Whereas on the contrary all Bodies are obſerved to have always a certain and determinate Motion according to the degrees of their External Impulſe, and their inward Principle of Gravitation, and the Reſiſtance of the Bodies they occurr with: which therefore is without Error exactly foreſeen and computed by ſagacious Artiſts. And if ever Dead Matter ſhould deviate from this Motion; it could not proceed from it ſelf, but a ſupernatural Agent; and ought not to be called a Chance, but a Miracle.

For Chance is but a mere name, and really Nothing in it ſelf: a Conception of our own Minds, and only a Compendious way of ſpeaking, whereby we would expreſs, That ſuch Effects, as are commonly attributed to Chance, were verily produced by their true and proper Cauſes, but without their deſigning to produce them. And in any Event called Caſual, if you take away the real and phyſical Cauſes, there remains nothing, but a ſimple Negation of the Agents intending ſuch an Event: which Negation being no real Entity, but a Conception only of Man's Intellect wholly extrinſecal to the Action, can have no title to a ſhare

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in the production. As in that famous Example (which *Plutarch* ſays, is the only one, where Fortune is related to have done a thing artificially) when a Painter having finiſh'd the Picture of a Horſe, excepting the looſe Froth about his Mouth and his Bridle; and after many unſucceſsfull eſſays deſpairing to do that to his ſatisfaction, in a great rage threw his Spunge at it, all beſmear'd, as it was, with the Colours; which fortunately hitting upon the right place, by one bold ſtroke of Chance moſt exactly ſupplied the want of Skill in the Artiſt: even here it is manifeſt, that conſidering the Quantity and Determination of the Motion, that was impreſſed by the Painter's hand upon the Spunge, compounded with the ſpecifick Gravity of the Spunge, and reſiſtance of the Air; the Spunge did mechanically and unavoidably move in that particular line of Motion, and ſo neceſſarily hit upon that part of the Picture; and all the paint, that it left there, was as certainly placed by true natural Cauſes, as any one ſtroke of the Pencil in the whole Piece. So that this ſtrange effect of the Spunge was fortuitous only with reſpect to the Painter, becauſe he did not deſign nor forſee ſuch an effect; but in it ſelf and as to its real Cauſes it was neceſſary and natural. In a word, the true notion of *Fortune* (τῆς τύχης) denoteth no more, than the Ignorance of ſuch an

Plutarch. περὶ τύχης.

event in ſome Knowing Agent concerned about it. So that it owes its very Being to Humane Underſtanding, and without relation to that is really Nothing. How abſurd then and ridiculous is the Atheiſt, that would make this Fortune the cauſe of the Formation of Mankind; whereas manifeſtly there could be no ſuch Thing or Notion in the World as Fortune, till Humane Nature was actually formed? It was Man that firſt made Fortune, and not Fortune that produced Man. For ſince Fortune in its proper acceptation ſuppoſeth the Ignorance of ſomething, in a ſubject capable of Knowledge; if you take away Mankind, ſuch a Notion hath no Exiſtence, neither with relation to Inanimate Bodies that can be conſcious of nothing, nor to an Omniſcient God, that can be ignorant of nothing. And ſo likewiſe the adequate Meaning of *Chance* (τῦ Αυτομάτυ) (as it is diſtinguiſhed from Fortune; in that the latter is underſtood to befall only Rational Agents, but Chance to be among Inanimate Bodies) is a bare Negation, that ſignifies no more than this, That any Effect among ſuch Bodies aſcribed to Chance, is really produced by Phyſical Agents, according to the eſtabliſhed Laws of Motion, but without their Conſciouſneſs of concurring to the Production, and without their Intention of ſuch an Effect. So that *Chance*

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in its true ſenſe is all one with *Nature*; and both words are uſed promiſcuouſly by ſome ancient Writers to expreſs the ſame thing. And we muſt be wary, leſt we aſcribe any real Subſiſtence or Perſonality to this Nature or Chance: for it is merely a notional and imaginary thing; an abſtract Univerſal, which is properly Nothing; a Conception of our own making, occaſion'd by our reflecting upon the ſettled Courſe of things; denoting only thus much, That all thoſe Bodies move and act according to their eſſential properties and qualities without any conſciouſneſs or intention of ſo doing. So that in this genuine acceptation of Chance, here is nothing ſuppoſed, that can ſuperſede the known Laws of Natural Motion: and thus to attribute the Formation of Mankind to Chance, is all one with the former Atheiſtical Aſſertion, that aſcribes it to Nature or Mechaniſm: and conſequently it hath received a prolix and ſufficient Refutation in my preceding Diſcourſe.

Plato X. de Legibus. Πῦρ καὶ ὕδωρ καὶ γῆν καὶ ἀέρα, φύσει πάντα εἶναι καὶ τύχῃ φασίν —— οὔτε διὰ τινὰ θεὸν, οὔτε διὰ τέχνην, ἀλλὰ ὃ λέγομεν φύσει καὶ τύχῃ.

(3) But thirdly, 'tis likely that our Atheiſt may willingly renounce the Doctrine of Chance as a thing differing from Nature, and may allow it to be the ſame thing, and that too no real and ſubſtantial Agent, but only an abſtract intellectual Notion: but ſtill he hath another Expedient in reſerve,

ſerve, which is a middle and ſafe way between the former rigorous Mechaniſm and the extravagancies of Fortuitous Motion: *viz.* That at the Beginning all things ('tis true) proceded neceſſarily and fatally according to the Mechanical powers and affections of Matter: but nevertheleſs the ſeveral Kinds of Animals were not formed at the firſt trial and effort without one error or miſcarriage; (as ſtrict Mechaniſm would ſuppoſe;) but there was an immenſe Variety of Ferments and Tumors and Excreſcences of the Soil, pregnant and big with *Fœtus*'s of all imaginable ſhapes and ſtructures of Body: Millions of which were utterly uncapable of Life and Motion, being the *Molæ*, as it were, and the Abortions of Mother Earth: and many of thoſe that had Life and Powers to preſerve their own Individuals, yet wanted the due means of Propagation, and therefore could not tranſmit their Species to the following Ages: and that thoſe few only, that we now find in Being, did happen (for he cannot expreſs it but by the Characters of a Chance) to have all the parts neceſſary not only for their own Lives, but for the Continuation of their Kinds. This is the favourite Opinion, among the Atheiſts, and the moſt plauſible of all; by which they think they may elude that moſt formidable Argument for the Being of God, from the admirable contrivance of

Βυγενῆ ἀνδρείπρωρα Emped.

of Organical Bodies and the exquiſite fitneſs of their ſeveral Parts for thoſe Ends and Uſes they are put to, and ſeem to have been deſigned for. For, ſay they, ſince thoſe innumerable Inſtances of Blunder and Deformity were quickly removed out of Knowledge and Being; it is plain that no Animals ought now to be found, but ſuch as have due Organs neceſſary for their own nouriſhment and increaſe of their Kinds: ſo that this Boaſted Uſefulneſs of Parts, which makes Men attribute their Origination to an intelligent and wiſe Agent, is really no argument at all: becauſe it follows alſo from the Atheiſts Aſſertion. For ſince ſome Animals are actually preſerved in Being till now, they muſt needs all of them have thoſe parts that are of Uſe and Neceſſity: but That at firſt was only a Lucky Hit without Skill or Deſign, and ever ſince is a neceſſary condition of their Continuation. And ſo for inſtance, when they are urged with the admirable Frame and Structure of the Eye; which conſiſts of ſo great a Variety of Parts, all excellently adapted to the Uſes of Viſion; that (to omit Mathematical Conſiderations with relation to Opticks) hath its many Coats and Humours tranſparent and colourleſs, leſt it ſhould tinge and ſophiſticate the Light that it lets in, by a natural Jaundice; that hath its Pupil ſo conſtituted, as to admit of Contraction and Dila-

tation

tation according to the differing degrees of Light, and the Exigencies of ſeeing; that hath Eye lids ſo commodiouſly placed, to cleanſe the Ball from Duſt, to ſhed neceſſary moiſture upon it through numerous Glandules, and to be drawn over it like a Curtain for the convenience of ſleep; that hath a thouſand more Beauties in its figure and texture never ſtudied nor admired enough: they will briskly reply, that they willingly concede all that can be ſaid in the commendation of ſo noble a member; yet notwithſtanding they cannot admit for good reaſoning, *He that formed the Eye, ſhall not he ſee?* For it was blind Nature alone or Matter mechanically moved without conſciouſneſs or direction, that made this curious Organ of Viſion. For the ſhort of the matter is this: This elegant ſtructure of the Eye is no more than is neceſſary to Seeing; and this noble faculty of Seeing is no more than is neceſſary to Life; and conſequently is included in the very ſuppoſitions of any Animals living and continuing till now; though thoſe be but the very few that at the beginning had the good fortune to have Eyes, among many millions of Monſters that were deſtitute of them, *ſine vultu cæca reperta*, and therefore did fatally periſh ſoon after their Birth. And thus when we inſiſt on other like arguments of Divine Wiſdom in the frame of Animate

Pſal. 94. 9.

Lucret. Lib. 5.

mate Bodies; as the artificial Poſition of many Myriads of Valves, all ſo ſituate as to give a free paſſage to the Blood and other Humors in their due Chanels and Courſes, but not permit them to regurgitate and diſturb the great Circulation and Oeconomy of Life; as the Spiral, and not Annulary, Fibres of the Inteſtines for the better Exerciſe of their Functions; as the provident furniſhing of Temporary parts for the *Fœtus* during the time of geſtation, which are afterwards laid aſide; as the ſtrange ſagacity of little Inſects in chooſing fit Places for the Excluſion of their Eggs, and for the proviſion of proper food, when the young ones are hatcht and need it; as the ardent סגלה or natural Affection in thoſe Animals, whoſe off-ſpring cannot at firſt procure their own ſuſtenance, but muſt infallibly periſh, if not fed by the Parents; as the untaught Inſtincts and Impreſſes upon every ſpecies, directing them without imitation or deliberation to the ready knowledge of proper food, to one and the beſt way of their preſervation and defence, and to the never-failing propagation of their own kind: what-ever Conſiderations of this nature you propoſe to this Atheiſt, as indeed ſuch Inſtances are innumerable, all evidently ſetting forth the Almighty's Wiſdom and Goodneſs to ſuch as are able to judge, and will judge impartially; he hath this one ſubterfuge from them

all, That theſe things are miſtaken for tokens of Skill and Contrivance, though they be but neceſſary Conſequences of the preſent Exiſtence of thoſe Creatures. For he that ſuppoſeth any Animals to ſubſiſt, doth by that very ſuppoſition allow them every Member and Faculty that are neceſſary to ſubſiſtence; ſuch as are thoſe we have juſt now enumerated. And therefore, unleſs we can prove *à priori* and independent of this Uſefulneſs, now that Things are once ſuppoſed to have exiſted and propagated; That among almoſt infinite Trials and Eſſays at the beginning of things, among millions of monſtrous Shapes and imperfect Formations, a few ſuch Animals, as now exiſt, *could not poſſibly* be produced; theſe After-Conſiderations are of very little moment: becauſe if ſuch Animals could in that way *poſſibly* be formed, as might live and move and propagate their Beings; all this admired and applauded Uſefulneſs of their ſeveral Fabricks is but a neceſſary condition and conſequence of their Exiſtence and Propagation.

This is the laſt pretence and ſophiſtry of the Atheiſts againſt the Propoſition in my Text, That we received our Life and Being from a Divine Wiſdom and Power. And as they cannot juſtly accuſe me of any ways concealing or balking their grand Objection: ſo I believe theſe following Conſiderations

ſiderations will give them no reaſon to boaſt, That it cannot receive a juſt and ſatisfactory Anſwer.

(1) Firſt therefore, we affirm that we can prove and have done it already by arguments *à priori* (which is the challenge of the Atheiſts) that theſe Animals, that now exiſt, could not *poſſibly* have been formed at firſt by millions of trials. For ſince they allow by their very *Hypotheſis* (and without ſtanding to that Courteſie we have proved it before) that there can be no caſual or ſpontaneous Motion of the Particles of Matter: it will follow that every ſingle Monſter among ſo many ſuppoſed Myriads muſt have been mechanically and neceſſarily formed according to the known Laws of Motion, and the temperament and quality of the Matter that it was made of. Which is ſufficient to evince, that no ſuch Monſters were or could have been formed. For to denominate them even Monſters; they muſt have had ſome rude kind of Organical Bodies; ſome *Stamina* of Life, though never ſo clumſy; ſome Syſtem of Parts compounded of Solids and Liquids, that executed, though but bunglingly, their peculiar Motions and Functions. But we have lately ſhewn it impoſſible for Nature unaſſiſted to conſtitute ſuch Bodies, whoſe ſtructure is againſt the Law of Specifick Gravity. So that ſhe could

Multaque tum tellus etiam Portenta creare, &c. Lucret. 5.

not make the leaſt endeavour towards the producing of a Monſter; or of any thing that hath more Vital and Organical Parts, than we find in a Rock of Marble or a Fountain of Water. And *again*, though we ſhould not contend with them about their Monſters and Abortions; yet ſince they ſuppoſe even the perfect Animals, that are ſtill in being, to have been formed mechanically among the reſt; and only add ſome millions of Monſters to the reckoning; they are liable to all the Difficulties in the former Explication, and are expreſly refuted through the whole preceding Sermon: where it is abundantly ſhown, that a Spontaneous Production is againſt the Catholick Laws of Motion, and againſt Matter of Fact; a thing without Example, not only in Man and the nobler Animals, but in the Smalleſt of Inſects and the Vileſt of Weeds: though the Fertility of the Earth cannot be ſaid to have been impaired ſince the beginning of the World.

(2) Secondly, we may obſerve that this Evaſion of the Atheiſt is fitted only to elude ſuch Arguments of Divine Wiſdom, as are taken from things Neceſſary to the conſervation of the Animal, as the Faculties of Sight and Motion and Nutrition, and the like; becauſe ſuch Uſefulneſs is indeed included in a general Suppoſition of the Exiſtence

ſtence of that Animal: but it miſerably fails him againſt other Reaſons from ſuch Members and Powers of the Body, as are not neceſſary abſolutely to Living and Propagating, but only much conduce to our better Subſiſtence and happier Condition. So the moſt obvious Contemplation of the frame of our Bodies; as that we all have double Senſories, two Eyes, two Ears, two Noſtrils, is an effectual Confutation of this Atheiſtical Sophiſm. For a double Organ of theſe Senſes is not at all comprehended in the Notion of bare Exiſtence: one of them being ſufficient to have preſerved Life, and kept up the Species; as common Experience is a witneſs. Nay even the very Nails of our Fingers are an infallible Token of Deſign and Contrivance: for they are uſeful and convenient to give ſtrength and firmneſs to thoſe Parts in the various Functions they are put to; and to defend the numerous Nerves and Tendons that are under them, which have a moſt exquiſite ſenſe of Pain, and without that native Armour would continually be expoſed to it: and yet who will ſay, that Nails are abſolutely neceſſary to Humane Life, and are concluded in the Suppoſition of Simple Exiſtence? It is manifeſt therefore, that there was a Contrivance and Foreſight of the Uſefulneſs of Nails antecedent to their Formation. For the old ſtale

pretence

Lucret. lib. 4. *Nil ideo quoniam natum eſt in corpore, ut uti Poſſemus: ſed quod natum eſt, id procreat uſum.*

pretence of the Atheiſts, That things were firſt made fortuitouſly, and afterwards their Uſefulneſs was obſerv'd or diſcover'd, can have no place here; unleſs Nails were either abſolutely requiſite to the Exiſtence of Mankind, or were found only in ſome Individuals or ſome Nations of men; and ſo might be aſcribed to neceſſity upon one account, or to Fortune upon the other. But from the Atheiſt's ſuppoſition, That among the infinite Diverſity of the firſt terreſtrial Productions, there were Animals of all imaginable ſhapes and ſtructures of Body, all of which ſurvived and multiplied, that by reaſon of their Make and Fabrick could poſſibly do ſo; it neceſſarily follows, that we ſhould now have ſome Nations without Nails upon their Fingers; others with one Eye only, as the Poets deſcribe the *Cyclopes* in *Sicily*, and the *Arimaſpi* in *Scythia*; others with one Ear, or one Noſtril, or indeed without any Organ of Smelling, becauſe that Senſe is not neceſſary to Man's ſubſiſtence; others deſtitute of the uſe of Language, ſince Mutes alſo may live: one People would have the Feet of Goats, as the feigned *Satyrs* and *Paniſci*; another would reſemble the Head of *Jupiter Ammon*, or the horned Statues of *Bacchus*: the *Sciapodes*, and *Enotocœtæ* and other monſtrous Nations would no longer be Fables, but real inſtances in Nature: and, in a word, all

Plinius & Strabo.

all the ridiculous and extravagant ſhapes that can be imagin'd, all the fancies and whimſies of Poets and Painters and *Ægyptian* Idolaters, if ſo be they are conſiſtent with Life and Propagation, would be now actually in Being, if our Atheiſt's Notion were true: which therefore may deſervedly paſs for a mere Dream and an Error: till they pleaſe to make new Diſcoveries in *Terra Incognita*, and bring along with them ſome Savages of all theſe fabulous and monſtrous Configurations.

(3) But thirdly, that we may proceed yet further with the Atheiſt, and convince him, that not only his Principle is abſurd, but his Conſequences alſo as abſurdly deduced from it: we will allow him an uncertain extravagant Chance againſt the natural Laws of Motion: though not forgetting that that notion hath been refuted before, and therefore this Conceſſion is wholly *ex abundanti*. I ſay then, that though there were really ſuch a thing as this Chance or Fortune; yet nevertheleſs it would be extremely abſurd to aſcribe the Formation of Humane Bodies to a Caſt of this Chance. For let us conſider the very Bodies themſelves. Here are confeſſedly all the marks and characters of Deſign in their ſtructure, that can be required, though one ſuppoſe a Divine Author had made them: here is nothing in the Work it ſelf, unworthy of ſo great

a Maſter: here are no internal arguments from the Subject againſt the truth of that Suppoſition. Have we then any capacity to judge and diſtinguiſh, what is the effect of Chance, and what is made by Art and Wiſdom? When a Medal is dug out of the ground, with ſome *Roman* Emperor's Image upon it, and an Inſcription that agrees to his Titles and Hiſtory, and an Impreſs upon the Reverſe relating to ſome memorable occurrence in his Life; can we be ſure, that this Medal was really coined by an Artificer, or is but a Product of the Soil from whence it was taken, that might caſually or naturally receive that texture and figure; as many kinds of Foſſils are very odly and elegantly ſhaped according to the modification of their conſtituent Salts, or the cavities they were formed in? Is it a matter of doubt and controverſie, whether the Pillar of *Trajan* or *Antoninus*, the Ruins of *Perſepolis*, or the late Temple of *Minerva* were the Deſigns and Works of Architecture; or perhaps might originally exiſt ſo, or be raiſed up in an Earthquake by ſubterraneous Vapour? Do not we all think our ſelves infallibly certain, that this or that very commodious Houſe muſt needs have been built by Humane Art; though perhaps a natural Cave in a Rock may have ſomething not much unlike to Parlors or Chambers? And yet he muſt be a mere Idiot,

Idiot, that cannot diſcern more Strokes and Characters of Workmanſhip in the Structure of an Animal (in an Humane Body eſpecially) than in the moſt elegant Medal or Ædifice in the World. They will believe the firſt Parents of Mankind to have been fortuitouſly formed without Wiſdom or Art: and that for this ſorry reaſon, Becauſe it is not ſimply *impoſſible*, but that they may have been formed ſo. And who can demonſtrate (if Chance be once admitted of) but that *poſſibly* all the Inſcriptions and other remains of Antiquity may be mere *Luſus Naturæ*, and not Works of Humane Artifice? If this be good reaſoning, let us no longer make any pretences to Judgment or a faculty of diſcerning between things Probable and Improbable: for, except flat contradictions, we may upon equal reaſons believe all things or nothing at all. And do the Atheiſts thus argue in common matters of Life? Would they have Mankind lie idle, and lay aſide all care of Proviſions by Agriculture or Commerce; becauſe poſſibly the Diſſolution of the World may happen the next moment? Had *Dinocrates* really carved Mount *Athos*, into a Statute of *Alexander* the Great, and had the memory of the fact been obliterated by ſome accident; who could afterwards have proved it impoſſible, but that it might

Lucret. 5. *Dictis dabit ipſa fidem res Forſitan, & graviter terrarum motibus orbis Omnia conquaſſari in parvo tempore cernes.*

caſually have been formed ſo? For every Mountain muſt have ſome determinate figure, and why then not a Humane one, as poſſibly as another? And yet I ſuppoſe none could have ſeriouſly believ'd ſo, upon this bare account of Poſſibility. 'Tis an opinion, that generally obtains among Philoſophers, That there is but one Common Matter, which is diverſified by Accidents, and the ſame numerical quantity of it by variations of Texture may conſtitute ſucceſſively all kinds of Bodies in the World. So that 'tis not abſolutely impoſſible; but that, if you take any other Matter of equal weight and ſubſtance with the Body of a Man, you may blend it ſo long, till it be ſhuffled into Humane ſhape and an Organical ſtructure. But who is he ſo abandon'd to ſottiſh credulity, as to think, upon that Principle, That a clod of Earth in a Sack may ever by eternal ſhaking receive the Fabrick of Man's Body? And yet this is very near a-kin, nay it is exactly parallel to the reaſoning of Atheiſts about fortuitous Production. If mere Poſſibility be a good foundation for Belief; even *Lucian*'s True Hiſtory may be *true* upon that account, and *Palæphatus*'s Tales may be *credible* in ſpite of the Title.

Palæph. Περὶ Ἀπίστων *De Incredibilibus.*

It hath been excellently well urged in this caſe both by Ancients and Moderns, that to attribute ſuch admirable Structures to blind Fortune or Chance,

Chance, is no leſs abſurd than to ſuppoſe, That if innumerable figures of the XXIV Letters be caſt abroad at random, they might conſtitute in due order the whole *Æneis* of *Virgil* or the *Annales* of *Ennius*. Now the Atheiſts may pretend to elude this Compariſon; as if the Caſe was not fairly ſtated. For herein we firſt make an Idea of a particular Poem; and then demand, if Chance can poſſibly deſcribe That: and ſo we conceive Man's Body thus actually formed, and then affirm that it exceeds the power of Chance to conſtitute a Being like That: which, they may ſay, is to expect Imitation from Chance, and not ſimple Production. But at the firſt Beginning of things there was no Copy to be followed, nor any præ-exiſtent Form of Humane Bodies to be imitated. So that to put the caſe fairly, we ſhould ſtrip our minds and fancies from any particular Notion and Idea of a Living Body or a Poem: and then we ſhall underſtand, that what Shape and Structure ſoever ſhould be at firſt caſually formed, ſo that it could live and propagate, might be Man: and whatſoever ſhould reſult from the ſtrowing of thoſe looſe Letters, that made any Senſe and Meaſures, might be the Poem we ſeek for.

Cicero *de Natura Deorum*, 2. 37.

To which we reply, That if we ſhould allow them, that there was no præ-exiſtent Idea of Hu-

mane Nature, till it was actually formed, (for the Idea of Man in the Divine Intellect muſt not now be conſider'd) yet becauſe they declare, that great Multitudes of each Species of Animals did fortuitouſly emerge out of the Soil in diſtant Countries and Climates; what could that be leſs than Imitation in blind Chance, to make many Individuals of one Species ſo exactly alike? Nay though they ſhould now, to croſs us and evade the force of the Argument, deſert their ancient Doctrine, and derive all ſorts of Animals from ſingle Originals of each kind, which ſhould be the common Parents of all the Race: yet ſurely even in this account they muſt neceſſarily allow Two at leaſt, Male and Female, in every Species: which Chance could neither make ſo very nearly alike, without Copying and Imitation; nor ſo uſefully differing, without Contrivance and Wiſdom. So that let them take whether they will: If they deduce all Animals from ſingle pairs of a ſort; even to make the Second of a Pair, is to write after a Copy; it is, in the former compariſon, by the caſting of looſe Letters to compoſe the præ-exiſtent particular Poem of *Ennius*: But if they make numerous Sons and Daughters of Earth among every Species of Creatures, as all their Authors have ſuppoſed;

Lucret. 5. *Hinc ubi quæque loci regio opportuna dabatur Creſcebant uteri, &c.* & ibidem. *Inde loci mortalia ſæcla creavit, Multa modis multis varia ratione coorta.*

poſed; this is not only, as was ſaid before, to believe a Monky may once ſcribble the *Leviathan* of *Hobbes*, but may do the ſame frequently by an Habitual kind of Chance.

Let us conſider, how next to Impoſſible it is that Chance (if there were ſuch a thing) ſhould in ſuch an immenſe Variety of Parts in an Animal twice hit upon the ſame Structure, ſo as to make a Male and Female. Let us reſume the former inſtance of the XXIV Letters thrown at random upon the ground. 'Tis a Mathematical Demonſtration, That theſe XXIV do admit of ſo many Changes in their order, may make ſuch a long roll of differently ranged Alphabets, not two of which are alike; that they could not all be exhauſted, though a Million millions of writers ſhould each write above a thouſand Alphabets a-day for the ſpace of a Million millions of years. What ſtrength of Imagination can extend it ſelf to embrace and comprehend ſuch a prodigious Diverſity? And it is as infallibly certain, that ſuppoſe any particular order of the Alphabet be aſſigned, and the XXIV Letters be caſt at a venture, ſo as to fall in a Line; it is ſo many Million of millions odds to one againſt any ſingle throw, that the aſſigned Order will not be caſt. Let us now ſuppoſe, there be only a thouſand conſtituent Members in the Body

Tucquetti Arithmet. cap. de Progreſſione.

of

of a Man, (that we may take few enough) it is plain that the different Poſition and Situation of theſe thouſand Parts, would make ſo many differing Compounds and diſtinct Species of Animals. And if only XXIV parts, as before, may be ſo multifariouſly placed and ordered, as to make many Millions of Millions of differing Rows: in the ſuppoſition of a thouſand parts, how immenſe muſt that capacity of variation be? even beyond all thought and denomination, to be expreſſed only in mute figures, whoſe multiplied Powers are beyond the narrowneſs of Language, and drown the Imagination in aſtoniſhment and confuſion. Eſpecially if we obſerve, that the Variety of the Alphabet conſider'd above, was in mere Longitude only: but the Thouſand parts of our Bodies may be Diverſified by Situation in all the Dimenſions of Solid Bodies: which multiplies all over and over again, and overwhelms the fancy in a new Abyſs of unfathomable Number. Now it is demonſtratively certain, that it is all this odds to one, againſt any particular trial, That no one man could by caſual production be framed like another; (as the Atheiſts ſuppoſe thouſands to be in ſeveral regions of the Earth;) and I think 'tis rather more odds than leſs, that no one Female could be added to a Male; in as much as that moſt neceſſary Difference of Sex is a higher token

token of Divine Wiſdom and Skill, above all the power of Fortuitous Hits, than the very Similitude of both Sexes in the other parts of the Body. And *again* we muſt conſider, that the vaſt imparity of this Odds againſt the accidental likeneſs of two Caſual Formations is never leſſen'd and diminiſh'd by Trying and Caſting. 'Tis above a Hundred to one againſt any particular throw, That you do not caſt any given Set of Faces with four Cubical Dice: becauſe there are ſo many ſeveral Combinations of the ſix Faces of four Dice. Now after you have caſt all the Hundred trials but one: 'tis ſtill as much odds at the laſt remaining time, as it was at the firſt. For blind inſenſible Chance cannot grow cunning by many experiments; neither have the preceding Caſts any influence upon thoſe that come after. So that if this Chance of the Atheiſts ſhould have eſſayed in vain to make a Species for a Million millions of Ages, 'tis ſtill as many Millions odds againſt that Formation, as it was at the firſt moment in the beginning of Things. How incredible is it therefore; that it ſhould hit upon two Productions alike, within ſo ſhort duration of the world, according to the Doctrine of our Atheiſts? how much more, that it ſhould do ſo within the compaſs of a hundred years, and of a ſmall tract of Ground;

Lucret. 5. *Verum, ut opinor, habet novitatem Summa, recensque Natura eſt mundi, neque pridem exordia cepit.*

ſo

ſo that this Male and Female might come together? If any Atheiſt can be induced to ſtake his Soul for a wager, againſt ſuch an inexhauſtible diſproportion; let him never hereafter accuſe others of Eaſineſs and Credulity.

(4) But fourthly, we will ſtill make more ample Conceſſions, and ſuppoſe with the Atheiſt, that his Chance has actually formed all Animals in their terreſtrial Wombs. Let us ſee now, how he will preſerve them to Maturity of Birth. What Climate will he cheriſh them in, that they be not inevitably deſtroyed by Moiſture or Cold? Where is that æquability of Nine Months warmth to be found? that uniform warmth, which is ſo neceſſary even in the incubation of Birds, much more in the time of geſtation of Viviparous Animals. I know, his Party have placed this great Scene in *Ægypt*, or ſome where between the two *Tropicks*. Now not to mention the Cool of the Nights, which alone would deſtroy the Conceptions; 'tis known that all thoſe Countries have either inceſſant Rains every year for whole months together, or are quite laid under water by Floods from the higher Grounds; which would certainly corrupt and putrefy all the teeming Wombs of the Earth, and extinguiſh the whole brood of *Embryons* by untimely Abortions.

Ceſalpin. Berigard.

(5) But

(5) But fifthly, we will ſtill be more obliging to this Atheiſt, and grant him his petition, That Nature may bring forth the young Infants vitally into the World. Let us ſee now what Suſtenance, what Nurſes he hath provided for them. If we conſider the preſent Conſtitution of Nature; we muſt affirm, that moſt Species muſt have been loſt for want of foſtering and feeding. 'Tis a great miſtake, that Man only comes weak and helpleſs into the world: whereas 'tis apparent, that excepting Fiſh and Inſects (and not all of them neither) there are very few or no Creatures, that can provide for themſelves at firſt without the aſſiſtance of Parents. So that unleſs they ſuppoſe Mother Earth to be a great Animal, and to have nurtured up her young Off-ſpring with a conſcious Tenderneſs and providential Care; there is no poſſible help for it, but they muſt have been doubly ſtarved both with hunger and cold.

(6) But ſixthly, we will be yet more civil to this Atheiſt, and forgive him this Difficulty alſo. Let us ſuppoſe the firſt Animals maintain'd themſelves with food, though we cannot tell how. But then what ſecurity hath he made for the Preſervation of Humane Race from the Jaws of ravenous Beaſts? The Divine Writers have acquainted us, that God at the beginning gave Mankind *Dominion*

(an impreſſed awe and authority) *over every living*
Gen. 1. 28. *thing that moveth upon the Earth.* But in the Atheiſts *Hypotheſis* there are no imaginable means of Defence. For 'tis manifeſt, that ſo many Beaſts of Prey, Lions, Tigres, Wolves, and the like, being of the ſame age with Man, and arriving at the top of their ſtrength in one year or two, muſt needs have worried and devoured thoſe forlorn Brats of our Atheiſts, even before they were wean'd from
Lucret. 5. the *Foramina Terræ*, or at leaſt in a ſhort time after: ſince all the Carnivorous Animals would have multiplied exceedingly by ſeveral Generations, before thoſe Children that eſcaped at firſt, could come to the Age of Puberty. So that Men would always leſſen, and their Enemies always encreaſe.

But ſome of them will here pretend, that *Epicurus* was out in this matter; and that they were not born mere Infants out of thoſe Wombs of the Earth; but Men at their full growth, and in the prime of their ſtrength. But I pray what ſhould hinder thoſe grown luſty Infants, from breaking ſooner thoſe Membranes that involved them; as the Shell of the Egg is broken by the Bird, and the *Amnion* by the *Fœtus*? Were the Membranes ſo thick and tough, that the *Fœtus* muſt ſtay there, till he had teeth to eat through them, as young Maggots do through a Gall? *But let us anſwer theſe Fools according to their*

their Folly. Let us grant, that they were born with Beards, and in the full time of Manhood. They are not yet in a better condition: here are ſtill many Enemies againſt few, many *Species* againſt One; and thoſe Enemies ſpeedily multiplying in the ſecond and third and much lower generations; whereas the Sons of the Firſt Men muſt have a tedious time of Childhood and Adoleſcence, before they can either themſelves aſſiſt their Parents, or encourage them with new hopes of Poſterity. And we muſt conſider withall, that (in the notion of Atheiſm) thoſe Savages were not then, what civilized Mankind is now; but *Mutum & turpe pecus*, without Language, without mutual Society, without Arms of Offence, without Houſes or Fortifications; an obvious and expoſed Prey to the ravage of devouring Beaſts; a moſt ſorry and miſerable Plantation towards the Peopling of a World.

And now that I have followed the Atheiſts through ſo many dark mazes of Error and Extravagance: having to my knowledge omitted nothing on their ſide, that looks like a Difficulty; nor propoſed any thing in Reply, but what I my ſelf really believe to be a juſt and ſolid Anſwer: I ſhall here cloſe up the Apoſtle's Argument of the Exiſtence of God from the conſideration of Humane

Nature. And I appeal to all ſober and impartial Judges of what hath been deliver'd; Whether thoſe Noble Faculties of our Souls may be only a mere Sound and Echo from the claſhing of ſenſeleſs Atoms, or rather indubitably muſt proceed from a Spiritual Subſtance of a Heavenly and Divine Extraction: whether theſe admirable Fabricks of our Bodies ſhall be aſcribed to the fatal Motions or fortuitous Shufflings of blind Matter, or rather beyond controverſie to the Wiſdom and Contrivance of the Almighty Author of all things, *Who is wonderfull in Counſel, and Excellent in Working.* To whom, *&c.*

Iſai. 28. 29.

A CONFUTATION OF ATHEISM FROM THE *Origin and Frame of the World.*

PART I.

The *Sixth* SERMON preached *October* 3. 1692.

Acts XIV. 15, &c.

That ye ſhould turn from theſe vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times paſt ſuffer'd all Nations to walk in their own ways. Nevertheleſs, he left not himſelf without witneſs, in that he did good, and gave us Rain from Heaven, and fruitfull Seaſons, filling our hearts with Food and Gladneſs.

ALL the Arguments, that can be brought, or can be demanded, for the Exiſtence of God, may, perhaps not abſurdly, be reduced to three General Heads: The *Firſt* of which will

will include all the Proofs from the Vital and Intelligent portions of the Univerſe, the Organical Bodies of the various Animals, and the Immaterial Souls of Men. Which Living and Underſtanding Subſtances, as they make incomparably the moſt conſiderable and noble Part of the naturally known and viſible Creation; ſo they do the moſt clearly and cogently demonſtrate to Philoſophical Enquirers the neceſſary Self-exiſtence, and omnipotent Power, and unſearchable Wiſdom, and boundleſs Beneficence of their Maker. This firſt Topick therefore was very fitly and divinely made uſe of by our Apoſtle in his Conference with Philoſophers and that inquiſitive People of *Athens*: the latter *ſpending their time in nothing elſe, but either to tell or hear ſome New thing*; and the other, in nothing, but to call in queſtion the moſt evident Truths, that were deliver'd and receiv'd of Old. And theſe Arguments we have hitherto purſued in their utmoſt latitude and extent. So that now we ſhall proceed to the *Second* Head, or the Proofs of a Deity from the Inanimate part of the World; ſince even Natural Reaſon, as well as Holy Scripture, aſſures us, That *the Heavens declare the Glory of God, and the Firmament ſheweth his Handy-work*; That *he made the Earth by his power, He hath eſtabliſhed the World by his wiſdom, and hath ſtretched out the Heaven by his underſtanding*; That *He commanded*

'Chap. 17. v. 2.

Pſal. 19. 1.

Jer. 51. 15.

Pſal. 148. 5

manded and they were created; he hath alſo eſtabliſhed them for ever and ever; He covereth the Heavens with Clouds, He prepareth Rain for the Earth, He crowneth the Year with his Goodneſs. 147. 8. 65. 2.

Theſe Reaſons for God's Exiſtence, from the Frame and Syſtem of the World, as they are equally true with the Former, ſo they have always been more popular and plauſible to the illiterate part of Mankind; inſomuch as the *Epicureans*, and ſome others, have obſerved, that mens contemplating the moſt ample Arch of the Firmament, the innumerable multitude of the Stars, the regular Riſing and Setting of the Sun, the periodical and conſtant Viciſſitudes of Day and Night and Seaſons of the Year, and the other Affections of Meteors and Heavenly Bodies, was the principal and almoſt only ground and occaſion, that the Notion of a God came firſt into the World: making no mention of the former Proof from the Frame of Humane Nature, *That in God we Live and Move and have our Being.* Which Argument being ſo natural and internal to Mankind, doth nevertheleſs (I know not how) ſeem more remote and obſcure to the Generality of Men; who are readier to fetch a Reaſon from the immenſe diſtance

Lucret. 5. *Præterea cœli rationes ordine certo, Et varia annorum cernebant tempora verti:* & lib. 6. *Nam bene qui didicere Deos ſecurum agere ævum, Si tamen interea mirantur, &c.* Cic. de Nat. Deor. lib. 2. *Quis hunc hominem dixerit, qui cum tam certos cœli motus, tam ratos aſtrorum ordines, &c.* Plutarch. de plac. phil. 1. 6. Θεῶν δ' ἔννοιαν ἔσχον ἀπὸ τῶν φαινομένων ἀστέρων, ἰδόντες τάξεις μεγάλης εὐμορφίας ὄντας αἰτίους, καὶ τιμωμένους ἡμέρᾳ τε καὶ νυκτὶ, χειμῶνά τε καὶ θέρος, ἀναπλήρωσίν τε καὶ δυσμάς.

diſtance of the ſtarry Heavens and the outmoſt Walls of the World, than ſeek one at home, within themſelves, in their own Faculties and Conſtitutions. So that hence we may perceive, how prudently that was waved, and the Second here inſiſted on by St. *Paul* to the rude and ſimple Semi-barbarians of *Lycaonia*: *He left not himſelf without witneſs, in that he did good, and gave us Rain from Heaven, and fruitfull Seaſons, filling our Hearts with Food and Gladneſs.* Which words we ſhall now interpret in a large and free Acceptation; ſo that this *Second* Theme may comprehend all the Brute Inanimate Matter of the Univerſe, as the *Former* comprized all viſible Creatures in the World, that have Underſtanding or Senſe or Vegetable Life. Theſe two Arguments are the Voices of Nature, the unanimous Suffrages of all real Beings and Subſtances created, that are naturally knowable without Revelation. And if, Laſtly, in the *Third* place, we can evince the Divine Exiſtence from the Adjuncts and Circumſtances of Humane Life; if we find in all Ages, in all civiliz'd Nations, an Univerſal Belief and Worſhip of a Divinity; if we find many unqueſtionable Records of Super-natural and Miraculous Effects; if we find many faithfull Relations of Prophecies punctually accompliſhed; of Prophecies ſo well atteſted, above the ſuſpicion of Falſhood; ſo remote

remote and particular and unlikely to come to paſs, beyond the poſſibility of good Gueſſing or the mere Foreſight of Humane Wiſdom; if we find a moſt warrantable tradition, that *at ſundry times and in divers manners God ſpake unto Mankind by his Prophets and by his Son and his Apoſtles*, who have deliver'd to us in Sacred Writings a clearer Revelation of his Divine Nature and Will: if, I ſay, this *Third* Topick from Humane Teſtimony be found agreeable to the ſtanding Vote and Atteſtation of Nature, What further proofs can be demanded or deſired? what fuller evidence can our Adverſaries require, ſince all the Claſſes of known Beings are ſummoned to appear? Would they have us bring more Witneſſes, than the All of the World? and will they not ſtand to the grand Verdict and Determination of the Univerſe? They are incurable Infidels, that perſiſt to deny a Deity; when all Creatures in the World, as well ſpiritual as corporeal, all from Humane Race to the loweſt of Inſects, *from the Cedar of* Libanus *to the Moſs upon the Wall*, from the vaſt Globes of the Sun and Planets, to the ſmalleſt Particles of Duſt, do declare their abſolute dependance upon the firſt Author and Fountain of all Being and Motion and Life, the only Eternal and Self-exiſtent God; with whom inhabit all Majeſty and Wiſdom and Goodneſs for ever and ever.

But before I enter upon this Argument from the Origin and Frame of the World; it will not be amiſs to premiſe ſome Particulars that may ſerve for an illuſtration of the Text, and be a proper Introduction to the following Diſcourſes.

As the Apoſtles, *Barnabas* and *Paul*, were preach-
Ver. 8. ing the Goſpel at *Lyſtra* a City of *Lycaonia* in *Aſia* the Leſs, among the reſt of their Auditors there was a lame Cripple from his Birth, whom *Paul* commanded with a loud voice, *To ſtand upright on his feet*; and immediately by a miraculous Energy *he leaped and walked.* Let us compare the preſent Circumſtances with thoſe of my former Text, and obſerve the remarkable difference in the Apoſtle's procedings. No queſtion but there were ſeveral Cripples at *Athens*, ſo very large and populous a City; and if that could be dubious, I might add, that the very Climate diſpoſed the Inhabitants to impotency
Lucret. Lib. 6. in the Feet. *Atthide tentantur greſſus, oculique in Achæis Finibus*···· are the words of *Lucretius*; which 'tis probable he tranſcribed from *Epicurus* a *Gargettian* and Native of *Athens*, and therefore an unqueſtionable Evidence in a matter of this nature. Nei-
Ver. 17. ther is it likely, that all the *Athenian* Cripples ſhould eſcape the ſight of St. *Paul*; ſince *he diſputed there in the Market daily with them that met him.* How comes it to paſs then, that we do not hear of a like Miracle

Miracle in that City; which one would think might have greatly conduced to the Apoſtle's deſign, and have converted, or at leaſt confuted and put to ſilence, the *Epicureans* and *Stoics*? But it is not difficult to give an account of this ſeeming Diſparity; if we attend to the Qualifications of the Lame perſon at *Lyſtra*: whom *Paul* ſtedfaſtly beholding, and *perceiving that he had* FAITH *to be healed, ſaid with a loud voice, Stand upright on thy Feet.* This is the neceſſary Condition, that was always required by our Saviour and his Apoſtles. *And Jeſus ſaid unto the blind man, Receive thy ſight, thy* FAITH *hath ſaved thee*; and to the Woman that had the Iſſue of Blood, *Daughter, be of good comfor, thy* FAITH *hath made thee whole, go in peace.* 'Twas want of FAITH in our Saviour's Countrymen, which hinder'd him from ſhedding among them the ſalutary Emanations of his Divine Vertue: *And he did not many mighty works there, becauſe of their Unbelief.* There were many diſeaſed perſons in his own Country, but very few that were rightly diſpoſed for a ſupernatural Cure. St. *Mark* hath a very obſervable Expreſſion upon the ſame occaſion: *And he* COULD *do no mighty work there, ſave that he laid his hands upon a few ſick folk, and healed them.* Καὶ οὐκ ΗΔΥΝΑΤΟ ἐκεῖ ἐν δυνάμει δύναμιν ποιῆσαι. We read in St. *Luke* 5. 17. *And the* POWER (δύναμις) *of the Lord was preſent to heal them.*

Ver. 9.

Luke 18. 42.

8. 48.

Matt. 13. 58.

Mark 6. 5.

And, chap. 6. v. 19. *And the whole multitude ſought to touch him: for there went Virtue* (δύναμις) *out of him, and healed them all.* Now ſince δύναμις and ἠδύνατο are words of the ſame Root and Signification; ſhall we ſo interpret the *Evangeliſt*, as if our Saviour had not *Power* to work Miracles among his unbelieving Countrymen? This is the paſſage, which that impious and impure Atheiſt *Lucilio Vanino* ſingled out for his Text, in his pretended and mock Apology for the Chriſtian Religion; wickedly inſinuating, as if the Prodigies of Chriſt were mere Impoſtures and acted by Confederacy: and therefore where the Spectators were incredulous, and conſequently watchfull and ſuſpicious, and not eaſily impoſed on, he COULD do no mighty Work there; there his Arm was ſhortened, and his Power and Virtue too feeble for ſuch ſupernatural Effects. But the groſs Abſurdity of this ſuggeſtion is no leſs conſpicuous, than the villainous Blaſphemy of it. For can it be credible to any rational perſon, that St. *Mark* could have that meaning? that he ſhould tax his Lord and Saviour, whom he knew to be God Almighty, with Deficiency of power? He *could* do no mighty Works; that is, he *would* do none, becauſe of their Unbelief. There's a frequent change of thoſe words in all Languages of the World. And we may appeal with

Vanini Dial. p. 439.

with St. *Chryſoſtom* to the common cuſtom of Speech, whatever Country we live in. This therefore is the genuine Sence of that expreſſion; Chriſt *would* not heal their infirmities, becauſe of the hardneſs and ſlowneſs of their Hearts, in that they believed him not. And I think there is not one inſtance in all the Hiſtory of the New Teſtament of a Miracle done for any ones ſake, that did not believe Jeſus to be a good perſon, and ſent from God; and had not a diſpoſition of Heart fit to receive his Doctrine. For to believe he was the Meſſias and Son of God, was not then abſolutely neceſſary, nor rigidly exacted; the moſt Signal of the Prophecies being not yet fulfilled by him, till his Paſſion and Reſurrection. But, as I ſaid, to obtain a Miracle from him, it was neceſſary to believe him a good perſon and ſent from God. *Herod* therefore *hoped* in vain *to have ſeen ſome Miracle done by him*: And when *the Phariſees ſought of him a ſign from Heaven, tempting him*; they received this diſappointing Anſwer, *Verily I ſay unto you, There ſhall no Sign be given to this generation.* And we may obſerve in the Goſpels, That where the Perſons themſelves were incapable of actual Faith; yet the Friends and Relations of thoſe Dead that were raiſed again to life, of thoſe Lunaticks and Demoniacks that

Chryſ. ad locum, Τοῦτο δὲ καὶ ἐν κοινῇ συνηθείᾳ φυλαττόμενον ἴδοι τις ἄν. So δύναμαι is volo, *Acts* 4. 20. *John* 7. 7. *and* θέλω is poſſum. *Vid. Budai Comm. L Gr.*

See John *ch.* 9. *and* Matt. 16. 14.

Luk. 23. 8.

Mark 8. 12.

Matt. 17. 15. 15. 22. Luke 8. 4.

were

were reſtored to their right minds, were ſuch as *ſought after him and believed on him.* And as to the
Luke 22. 51. healing of *Malchus*'s Ear, it was a peculiar and extraordinary Caſe: For though the perſon was wholly unworthy of ſo gracious a Cure; yet in the account of the meek Lamb of God it was a kind of Injury done to him by the fervidneſs of St. *Peter*, who knew not yet what Spirit he was of, and that his Maſter's Kingdom was not of this World. But beſides this obvious meaning of the Words of the Evangeliſt, there may perhaps be a ſublimer Senſe couched under the Expreſſion. For in the Divine Nature *Will* and *Can* are frequently the ſelf-ſame thing; and Freedom and Neceſſity, that are oppoſites here below, do in Heaven above moſt amicably agree and joyn hands together. And this is not a Reſtraint, or Impotency; but the Royal Prerogative of the moſt abſolute King of Kings; that he *wills* to do nothing but what he *can*; and that he *can* do nothing which is repugnant to his divine Wiſdom and eſſential Goodneſs. God *cannot* do what is unjuſt, nor ſay what is untrue, nor promiſe with a mind to deceive. Our Saviour therefore *could* do no mighty Work in a Country of Unbelievers; becauſe it was not fit and reaſonable. And ſo we may ſay of our Apoſtle, who was acted by the Spirit of God; that he *could* do no Miracle at *Athens*, and that

that becauſe of their *Unbelief*. There is a very ſad and melancholy Account of the ſucceſs of his ſtay there. *Howbeit CERTAIN Men clave unto him and believed*; A more diminutive expreſſion, than if they had been called *a few*. And we do not find, that he ever viſited this City again, as he did ſeveral others, where there were a competent number of Diſciples. And indeed if we conſider the Genius and Condition of the *Athenians* at that time, How vitious and corrupt they were; how conceited of their own Wit and Science and Politeneſs, as if They had invented Corn and Oil and diſtributed them to the World; and had firſt taught Civility, and Learning, and Religion, and Laws to the reſt of Mankind; how they were puffed up with the fulſome Flatteries of their Philoſophers and Sophiſts and Poets of the Stage: we cannot much wonder, that they ſhould ſo little regard an unknown Stranger, that preached unto them *an unknown God*.

Τινὲς δὲ ἄνδρες, c. 17. v. 34.

Cicero pro Flacco. *Adſunt Athenienſes, unde humanitas, doctrina, religio, fruges, jura, leges ortæ atque in omnes terras diſtributæ putantur.* Iſoc. Paneg. Diod. Sic. 13.

I am aware of an Objection, that for ought we can now affirm, St. *Paul* might have done ſeveral Miracles at *Athens*, though they be not related by St. *Luke*. I confeſs I am far from aſſerting, That all the Miracles of our Saviour are recorded in the Goſpels, or of his Apoſtles in the Acts. But nevertheleſs,

See John 21. 25. *and* 2 Cor. 12. 12.

vertheleſs, in the preſent Circumſtances, I think we may conjecture, That if any Prodigy and Wonder had been performed by our Apoſtle among thoſe curious and pragmatical *Athenians*; it would have had ſuch a conſequence, as might have deſerved ſome place in Sacred Hiſtory, as well as this before us at *Lyſtra*: where *when the people ſaw what Paul had done, they lift up their voices, ſaying in the ſpeech of Lycaonia, The Gods are come down to us in the likeneſs of men*: and the Prieſts came with Oxen and Garlands, and would have ſacrificed to them, as to *Jupiter* and *Mercurius*. That this was a common Opinion among the *Gentiles*, that the Gods ſometimes aſſumed Humane ſhape, and converſed upon Earth as Strangers and Travellers, muſt needs be well known to any one, that ever looks into the ancient Poets. Even the Vagabond Life of *Apollonius Tyanenſis* ſhall be called by a bigotted Sophiſt, ἐπιδημία ἐς ἀνθρώπους Θεοῦ, a Peregrination of a God among Men. And when the *Lyſtrians* ſay, ὁμοιωθέντες ἀνθρώποις, *Gods in the Shape of Men*, they mean not, that the Gods had other Figure than Humane even in Heaven it ſelf (for that was the receiv'd Doctrine of moſt of the Vulgar Heathen, and of ſome Sects of Philoſophers too,) but that They, who in their own Nature were of a more auguſt Stature and glorious Viſage, had now contracted and debaſed themſelves

Ver. 11.

Eunapius, cap. 2.

themſelves into the narrower Dimenſions and meaner Aſpects of mortal Men. Now when the Apoſtles heard of this intended Sacrifice, *they rent their cloaths and ran in among the people, crying out,* &c. Ver. 14. St. *Chryſoſtom* upon this place hath a very odd Expoſition. He enquires why *Paul* and *Barnabas* do now at laſt reprove the People, when the Prieſt and Victims were even at the Gates; and not preſently, when they lift up their Voice, and called them Gods: for which he aſſigns this reaſon, That becauſe they ſpoke Λυκαονιστὶ, *in the Lycaonian Tongue,* the Apoſtles did not then underſtand them: but now they perceived their meaning by the Oxen and the Garlands. Indeed it is very probable, that the *Lycaonian* Language was very different from the *Greek*; as we may gather from *Ephorus* and *Strabo* that cites him, who make almoſt all the Inland Nations of *Aſia Minor* to be *Barbarians*; and from *Stephanus Byzantius*, who acquaints us, that ἄρκευθος, a Juniper-tree, was called δέλβεια in the Speech of the *Lycaonians*, ἐν τῇ τῶν Λυκαόνων φωνῇ. But notwithſtanding we can by no means allow, that the great Apoſtle of the *Gentiles* ſhould be ignorant of that Language: He that ſo ſolemnly affirms of himſelf, *I thank my God, I ſpeak with Tongues more than you all.* 1 Cor. 14. 18. And at the firſt Effuſion of his

Ἀλλ' οὐκ ἦν τοῦτο οὐδέπω δῆλον, τῇ δὲ οἰκείᾳ φωνῇ ἐφθέγγοντο· διὰ τοῦτο οὐκ ἦν αὐτοῖς ἔλεγον, ἐπειδὴ δὲ εἶδον τὰ στέμματα, τότε ἐξελθόντες διέῤῥηξαν τὰ ἱμάτια αὐτῶν. Chryſ. ad loc.

Ephorus apud *Strab.* lib. 14.

Steph. voce Δέρκη.

Acts 2. heavenly Gift, *the dwellers in Cappadocia, in Pontus and Aſia, Phrygia and Pamphylia* (ſome of them near Neighbours to the *Lycaonians*) *heard the Apoſtles ſpeak in their ſeveral Tongues the wonderfull Works of God.* And how could theſe two Apoſtles have
Ver. 7. preached the Goſpel to the *Lyſtrians*, if they did not uſe the common Language of the Country? And
Ver. 15. to what purpoſe did they *cry out* and ſpeak to them, if the Hearers could not apprehend? or how could
Ver. 15. they by thoſe *Sayings reſtrain the People* from ſacrificing; if what they ſaid was not intelligible? But it will be asked, why then were the Apoſtles ſo ſlow and backward in reclaiming them? and what can be anſwer'd to the Query of St. *Chryſoſtom*? When I conſider the circumſtances and nature of this affair, I am perſuaded they did not hear that diſcourſe of the people. For I can hardly conceive, that Men under ſuch apprehenſions as the *Lyſtrians* then were, in the dread Preſence and under the very Nod of the almighty *Jupiter*, not an Idol of Wood or Stone, but the real and very God (as the *Athenians* made their Complement to *Demetrius Poliorcetes*) ſhould exclaim in his ſight and hearing: this, I ſay, ſeems not probable nor natural; nor is it affirm'd in the Text: but they might buzz and whiſper it one to another, and ſilently withdrawing from the preſence of the Apoſtles, they then *lift up their voices* and noiſed

Οὐ ξύλινον, ἢ δὲ λίθινον, ἀλλ' ἀληθινόν. Athenæus, 6. 15.

Ὥσθ' ὅτε ἐπίστευεν ἰδὼν ἐς πλησίον ἄλλον.

noiſed it about the City. So that *Paul* and *Barnabas* were but juſt then inform'd of their idolatrous deſign, when they rent their Cloaths, and ran in among them, and expoſtulated with them; *Sirs, why do ye theſe things? we alſo are men of like paſſions with you*; ὁμοιοπαθεῖς ὑμῖν, * *Mortal* men like your ſelves, as it is judiciouſly render'd in the ancient Latin Verſion, otherwiſe the *Antitheſis* is not ſo plain: For the Heathen Theology made even the Gods themſelves ſubject to humane paſſions and appetites, to Anger, Sorrow, Luſt, Hunger, Wounds, Lameneſs, &c. and exempted them from nothing but Death and Old Age: *and we preach unto you, that ye ſhould turn from theſe vanities (i. e.* Idols*) unto the Living God, which made Heaven and Earth and the Sea, and all things that are therein: who in times paſt ſuffered all Nations to walk in their own ways*: Πάντα τὰ ἔθνη, not *all Nations*, but *all the Heathen* (the word HEATHEN comes from ἔθνη) *all the Gentiles*, diſtinguiſhed from the Jews, as the ſame words are tranſlated *Rom.* 15. 11. and 2 *Tim.* 4. 17. and ought to have been ſo, *Rom.* 1. 5. and 16. 26. but much more in our Text, which according to the preſent Verſion ſeems to carry a very obſcure, if not erroneous meaning; but by a true interpretation is very eaſie and intelligible; That hitherto God had ſuffer'd all the Gentiles to walk in their own ways; and excepting the Jews only,

Ver. 15.

* *Mortales ſumus ſimiles vobis homines.*

So Εἰ γὰρ ἀποθνήσκω, *If I die*, a common Expreſſion in Gr. Writers.

Ἀλλὰ ἐπιστρέφειν ἀπὸ τούτων τῶν ματαίων ἐπὶ θεὸν ζῶντα, ὃς ἐποίησε τὸν οὐρανὸν καὶ τὴν γῆν καὶ τὴν θάλασσαν καὶ πάντα τὰ ἐν αὐτοῖς· ὃς ἐν ταῖς παρῳχημέναις γενεαῖς εἴασε πάντα τὰ ἔθνη πορεύεσθαι ταῖς ὁδοῖς αὐτῶν. Hom.

See Acts 4. 27. 14. 5. 26. 17. Gal. 2. 14.

only, whom he choſe for his own people, and preſcribed them a Law, he permitted the reſt of Mankind to walk by the mere light of Nature without the aſſiſtance of Revelation: but that now in the fulneſs of time, he had even to the Gentiles alſo *ſent ſalvation*, and *opened the door of faith*, and *granted repentance unto life*. So that theſe words of our Apoſtle are exactly co-incident with that remarkable paſſage in his diſcourſe to the *Athenians*: *And the* (paſt) *times of this ignorance* (of the Gentile World) *God winked at* (or * overlook'd:) *but now commandeth all men every where to repent*. And *nevertheleſs*, ſays our Text, even in that gloomy ſtate of Heatheniſm, *he left not himſelf without witneſs, in that he did good*, ἀγαθοποιῶν ἐξ οὐρανῦ, always *doing good from Heaven*, (which ſeems to be the genuine punctuation, and is authorized by the Syriack Interpreters) *and gave us Rain and fruitfull Seaſons, filling our hearts with food and gladneſs*. Even the very Gentiles might *feel after him and find him*; ſince the admirable frame of *Heaven and Earth and Sea*, and the munificent proviſion of *food* and ſuſtenance for his Creatures, did competently ſet forth his Eternal Power and Godhead; ſo that ſtupid Idolaters and prophane Atheiſts were then and always without excuſe.

Acts 17. 30.

* ὑπεριδών.

כד עבד הוא לחון טבתא מן שמיא ומחות משרא·

So that they read ἀγαθοποιῶν ἐξ οὐρανῦ, καὶ ὑετὸν δ. Horat. *Nec ſiquid miri faciat natura, Deos id Triſtes ex alto cæli demittere tecto.*

Our

Our Adverſaries have uſed the ſame methods to elude the preſent Argument from the Frame of the World, as they have done to evade the former from the Origin of Mankind. *Some* have maintain'd, That this World hath thus exiſted from all Eternity in its preſent form and condition: but *Others* ſay, That the Forms of particular Worlds are generable and corruptible; ſo that our preſent Syſtem cannot have ſuſtain'd an infinite Duration already gone and expired: but however, ſay they, Body in general, the common *Baſis* and Matter of all Worlds and Beings, is ſelf-exiſtent and eternal; which being naturally divided into innumerable little particles or atoms, eternally endued with an ingenit and inſeparable power of Motion, by their omnifarious concurſions and combinations and coalitions, produce ſucceſſively (or at once, if Matter be infinite) an infinite number of Worlds; and amongſt the reſt there aroſe this viſible complex Syſtem of Heaven and Earth. And thus far they do agree, but then they differ about the cauſe and mode of the production of Worlds, ſome aſcribing it to Fortune, and others to Mechaniſm or Nature. 'Tis true, the Aſtrological Atheiſts, will give us no trouble in the preſent diſpute; becauſe they cannot form a peculiar *Hypotheſis* here, as they have done before about the Origination of Animals. For though ſome

of

of them are ſo vain and ſenſeleſs, as to pretend to a *Thema Mundi*, a calculated Scheme of the Nativity of our World: yet it exceeds even Their abſurdity, to ſuppoſe the Zodiack and Planets to be efficient of, and antecedent to themſelves; or to exert any influences, before they were in Being. So that to refute all poſſible Explications that the Atheiſts have or can propoſe, I ſhall proceed in this following method.

I. Firſt, I will prove it impoſſible that the primary Parts of our World, the Sun and the Planets with their regular Motions and Revolutions, ſhould have ſubſiſted eternally in the preſent or a like Frame and Condition.

II. Secondly, I will ſhew, That Matter abſtractly and abſolutely conſider'd, cannot have ſubſiſted eternally; or, if it has, yet Motion cannot have coexiſted eternally with it, as an inherent Property and eſſential Attribute of the Atheiſt's God, Matter.

III. Thirdly, Though Univerſal Matter ſhould have endured from everlaſting, divided into infinite Particles in the *Epicurean* way, and though Motion ſhould have been coæval and coeternal with it: yet thoſe Particles or Atoms could never of themſelves by omnifarious kinds of Motion, whether Fortuitous or Mechanical, have fallen or been diſpoſed into this or a like viſible Syſtem.

IV. And

IV. And Fourthly, *à poſteriori*, That the Order and Beauty of the Inanimate Parts of the World, the diſcernible Ends and Final Cauſes of them, the τὸ Βελτίον, or a Meliority above what was neceſſary to be, do evince by a reflex Argument, That it is the Product and Workmanſhip, not of blind Mechaniſm or blinder Chance; but of an intelligent and benign Agent, *who by his excellent Wiſdom made the Heavens and Earth: and gives Rains and fruitfull Seaſons for the ſervice of Man.*

I ſhall ſpeak to the two firſt Propoſitions in my preſent Diſcourſe; reſerving the latter for other Opportunities.

I. Firſt, therefore: That the preſent or a like Frame of the World hath not ſubſiſted from Everlaſting. We will readily concede, that a thing may be truly Eternal, though its duration be terminated at one End. For ſo we affirm Humane Souls to be Immortal and Eternal, though ἦν ὅτε οὐκ ἦσαν, there was a time when they were Nothing; and therefore their Infinite Duration will always be bounded at one Extreme by that firſt beginning of Exiſtence. So that, for ought appears as yet; the Revolutions of the Earth and other Planets about the Sun, though they be limited at one end by the preſent Revolution, may nevertheleſs have been Infinite and

and Eternal without any beginning. But then we muſt conſider, that this Duration of Humane Souls is only *potentially* Infinite. For their Eternity conſiſts only in an endleſs capacity of Continuance without ever ceaſing to be, in a boundleſs Futurity that can never be exhauſted, or all of it be paſt and preſent. But their Duration can never be *poſitively* and *actually* Eternal; becauſe it is moſt manifeſt, that no Moment can ever be aſſigned, wherein it ſhall be true, that ſuch a Soul hath then actually ſuſtain'd an Infinite Duration. For that ſuppoſed Infinite Duration will by the very Suppoſition be limited at two extremes, though never ſo remote aſunder; and conſequently muſt needs be Finite. Wherefore the true Nature and Notion of a Soul's Eternity is this: That the future moments of its Duration can never be all *paſt and preſent*; but ſtill there will be a Futurity and Potentiality of more for ever and ever. So that we evidently perceive, from this inſtance, That what-ever ſucceſſive Duration, ſhall be bounded at one end, and be all *paſt and preſent*, for that reaſon muſt be Finite. Which neceſſarily evinceth, That the preſent or a like World can never have been Eternal; or that there cannot have been Infinite paſt Revolutions of a Planet about a Sun. For this ſuppoſed Infinity is terminated at one extreme by the *preſent* Revoluti-

on,

on, and all the other Revolutions are confeſſedly paſt; ſo that the whole Duration is bounded at one end, and all *paſt and preſent*; and therefore cannot have been Infinite, by what was proved before. And this will ſhew us the vaſt difference between the falſe ſucceſſive Eternity backwards, and the real one to come. For, conſider the *preſent* Revolution of the Earth, as the Bound and Confine of them both. God Almighty, if he ſo pleaſeth, may continue this Motion to perpetuity in Infinite Revolutions to come: becauſe Futurity is inexhauſtible, and can never be all ſpent and run out by *paſt and preſent* moments. But then, if we look backwards from this preſent Revolution, we may apprehend the impoſſibility of infinite Revolutions on that ſide: becauſe all are already *paſt*, and ſo were once actually *preſent*, and conſequently are finite, by the argument before. For ſurely we cannot conceive a Præteriteneſs (if I may ſay ſo) ſtill backwards *in infinitum*, that never was preſent: as we can an endleſs futurity, that never will be preſent. So that though one is potentially infinite; yet nevertheleſs the other is actually finite. And this Reaſoning doth neceſſarily conclude againſt the paſt infinite duration of all ſucceſſive Motion and mutable Beings: but it doth not at all affect the eternal Exiſtence of God, in whoſe invariable nature there is no Paſt nor Future; who

is omnipreſent not only as to Space, but as to Duration; and with reſpect to ſuch Omnipreſence, it is certain and manifeſt, that Succeſſion and Motion are mere impoſſibilities, and repugnant in the very terms.

And *Secondly*, though what hath been now ſaid, hath given us ſo clear a view of the nature of ſucceſſive Duration, as to make more Arguments needleſs: yet I ſhall here briefly ſhew, how our Adverſaries *Hypotheſis* without any outward oppoſition deſtroys and confutes it ſelf. For let us ſuppoſe infinite Revolutions of the Earth about the Sun to be already gone and expired: I take it to be ſelf-evident; that, if None of thoſe paſt Revolutions has been infinite ages ago, all the Revolutions put together cannot make up the duration of infinite ages. It follows therefore from this ſuppoſition, that there may be ſome one aſſignable Revolution among them, that was at an infinite diſtance from the preſent. But it is ſelf-evident likewiſe, that no one paſt Revolution could be infinitely diſtant from the preſent: for then an infinite or unbounded Duration may be bounded at two extremes by two Annual Revolutions; which is abſurd and a contradiction. And again, upon the ſame ſuppoſition of an eternal paſt Duration of the World, and of infinite Annual Revolutions of the Earth about the Sun;

Sun; I would ask concerning the Monthly Revolutions of the Moon about the Earth, or the diurnal ones of the Earth upon its one Axis, both which by the very *Hypotheſis* are coæval with the former; whether theſe alſo have been finite or infinite? Not finite to be ſure; becauſe then a finite number would be greater than an infinite, as 12 or 365 are more than an Unit. Nor infinite neither; for then two or three Infinites would exceed one another: as a Year exceeds a Month, or both exceed a Day. So that both ways the Suppoſition is repugnant and impoſſible.

And *Thirdly*, the Arguments already uſed, from the gradual Increaſe of Mankind, from the known Plantations of moſt Countries, from the recent Invention of Letters and Arts, *&c.* do conclude as forcibly againſt the Eternity of the World, as againſt infinite Generations of Humane Race. For if the preſent Frame of the Earth be ſuppoſed eternal; by the ſame notion they make Mankind to have been coeternal with it. For otherwiſe this eternal Earth, after ſhe had been eternally barren and deſolate, muſt at laſt have ſpontaneouſly produced Mankind, without new cauſe from without, or any alteration in her own texture: which is ſo groſs an abſurdity, that even no Atheiſt hath yet affirmed it. So that it evidently follows, ſince Mankind had a be- Serm. III.

ginning; that the preſent Form of the Earth, and therefore the whole Syſtem of the World had a beginning alſo.

Which being proved and eſtabliſhed; we are now enabled to give anſwers to ſome bold Queries and Objections of Atheiſts; That ſince God is deſcribed as a Being infinitely powerfull and perfectly good; and that theſe Attributes were eſſential to him from all Eternity; why did he not by his Power, for the more ample communication of his Goodneſs, create the World from eternity, if he created it at all? or at leaſt, many Millions of Ages ago before this ſhort ſpan of duration of five or ſix thouſand Years? To the firſt we reply, That ſince we have diſcover'd an internal and natural impoſſibility, that a ſucceſſive Duration ſhould be actually eternal; 'tis to Us a flat contradiction, that the World ſhould have been created from everlaſting. And therefore it is no affront to the Divine Omnipotence, if by reaſon of the formal incapacity and repugnancy of the thing, we conceive that the World could not poſſibly have been made from all Eternity, even by God himſelf. Which gives an anſwer to the ſecond Queſtion, Why created ſo lately? For if it could not be created from Eternity, there can no inſtant be aſſigned for its Creation in Time, though never ſo many Myriads and Millions of years ſince, but

but the ſame Query may be put, Why but now, and Why ſo late? For even before that remoter period, God was eternally exiſtent, and might have made the World as many Myriads of Ages ſtill backwards before That: and conſequently this Objection is abſurd and unreaſonable. For elſe if it was good and allowable, it would eternally hinder God from exerting his Creative Power: becauſe he could never make a World ſo early, at any given Moment; but it may truly be ſaid he could have created it ſooner. Or if they think, there may be a Sooneſt Inſtant of poſſible Creation: yet ſince all Inſtants have an equal pretence to it in humane apprehenſion, why may not this recent production of the World, according to Sacred Authority, be ſuppoſed to be that Sooneſt? At leaſt it may make that Claim to it, that cannot be baffled by their Arguments, which equally conclude againſt all Claims, againſt any conceivable Beginning of the World.

And ſo when they profanely ask, Why did not this ſuppoſed Deity, if he really made the Heavens, make them boundleſs and immenſe, a fit and honourable Manſion for an infinite and incomprehenſible Being? or at leaſt vaſtly more ample and magnificent, than this narrow Cottage of a World? we may make them this anſwer; *Firſt*, it ſeems impoſſible and a contradiction, that a created World

World ſhould be infinite; becauſe it is the nature of Quantity and Motion; that they can never be actually and poſitively infinite: They have a Power indeed and a capacity of being increaſed without end; ſo as no Quantity can be aſſigned ſo vaſt, but ſtill a larger may be imagin'd; no Motion ſo ſwift or languid, but a greater Velocity or Slowneſs may ſtill be conceived; no poſitive Duration of it ſo long, than which a longer may not be ſuppoſed; but even that very Power hinders them from being actually infinite. From whence *ſecondly* it follows; that, though the World was a million of times more ſpacious and ample, than even Aſtronomy ſuppoſes it; or yet another million bigger than that, and ſo on in infinite progreſſion; yet ſtill they might make the ſame Exception world without end. For ſince God Almighty can do all that is poſſible; and Quantity hath always a poſſibility of being enlarged more and more: he could never create ſo ample a World, but ſtill it would be true, that he could have made a bigger; the fœcundity of his Creative Power never growing barren, nor ever to be exhauſted. Now what may always be an exception againſt all poſſible Worlds, can never be a juſt one againſt any whatſoever.

And when they ſcoffingly demand, Why would this imaginary Omnipotence make ſuch mean pieces

pieces of Workmanſhip? what an indigent and impotent thing is his principal Creature Man? would not boundleſs Beneficence have communicated his divine Perfections in the moſt eminent degrees? They may receive this reply, That we are far from ſuch arrogance, as to pretend to the higheſt dignity, and be the chief of the whole Creation; we believe an inviſible World and a Scale of Spiritual Beings all nobler than our ſelves: nor yet are we ſo low and baſe as their Atheiſm would depreſs us; not walking Statues of Clay, not the Sons of brute Earth, whoſe final Inheritance is Death and Corruption; we carry the image of God in us, a rational and immortal Soul; and though we be now indigent and feeble, yet we aſpire after eternal happineſs, and firmly expect a great exaltation of all our natural powers. But whatſoever was or can be made, whether *Angels or Archangels, Cherubims, or Seraphims*, whether *Thrones or Dominions or Principalities or Powers*, all the glorious Hoſt of Heaven, muſt needs be finite and imperfect and dependent Creatures: and God out of the *exceeding greatneſs of his power* is ſtill able, without end, to create higher Claſſes of Beings. For where can we put a ſtop to the Efficacy of the Almighty? or what can we aſſign for the Higheſt of all poſſible finite Perfections? There can be no ſuch thing as an *almoſt Infinite*: there

there can be nothing Next or Second to an omni-
Horat. Car. 1. 12. potent God: *Nec viget quicquam ſimile aut ſecundum*; as the Heathen Poet ſaid excellently well of the ſuppoſed Father of Gods and Men. The infinite Diſtance between the Creator and the nobleſt of all Creatures can never be meaſured nor exhauſted by endleſs addition of finite degrees. So that no actual Creature can ever be the moſt perfect of all poſſible Creation. Which ſhews the folly of this Query, that might always be demanded, let things be as they will; that would impiouſly and abſurdly attempt to tie the Arm of Omnipotence from doing any thing at all, becauſe it can never do its Utmoſt.

II. I proceed now to the Second Propoſition, That neither Matter univerſally and abſtractly conſider'd, nor Motion as its Attribute and Property, can have exiſted from all Eternity. And to this I ſhall ſpeak the more briefly; not only becauſe it is an abſtruſe and metaphyſical Speculation; but becauſe it is of far leſs moment and conſequence than the reſt: ſince without this we can evince the Exiſtence of God from the Origin and Frame of the Univerſe. For if the preſent or a like Syſtem of the
By the firſt Propoſition. World cannot poſſibly have been eternal; and if without God it could neither naturally nor fortuitouſly

touſly emerge out of a Chaos; we muſt neceſſarily have recourſe to a Deity, as the Contriver and Maker of Heaven and Earth; whether we ſuppoſe he created them out of Nothing, or had the Materials ready eternally to his hand. But nevertheleſs, becauſe we are verily perſuaded of the truth of this Article, we ſhall briefly aſſign ſome reaſons of our Belief in theſe following Particulars. *By the third Propoſition.*

Firſt, *It is a thing poſſible, that Matter may have been produced out of Nothing.* It is urged as an Univerſal Maxim; that *Nothing can proceed from Nothing.* Now this we readily allow; and yet it will prove nothing againſt the Poſſibility of Creation. For when they ſay, Nothing from Nothing; they muſt ſo underſtand it, as excluding all Cauſes, both material and efficient. In which ſenſe it is moſt evidently and infallibly true: being equivalent to this propoſition; that Nothing can make it ſelf, or, Nothing cannot bring its no-ſelf out of non-entity into Something. Which only expreſſes thus much, That Matter did not produce it ſelf, or, that all Subſtances did not emerge out of an Univerſal Nothing. Now who-ever talked at that rate? We do not ſay, the World was created from Nothing and by Nothing; we aſſert an eternal God to have been the Efficient Cauſe of it. So that a Creation of the World out of Nothing by Something; and by that

Something, that includes in its Nature a neceſſary Exiſtence and perfection of Power; is certainly no Contradiction; nor oppoſes that common Maxim. Whence it manifeſtly follows, That ſince God may do any thing that implies not a Contradiction; if there be ſuch an Eſſence as God, he may have created Matter out of nothing, that is, have given an exiſtence to Matter, which had no Being before.

Serm. II. And Secondly, *It is very probable, that Matter has been actually created out of Nothing.* In a former Diſcourſe we have proved ſufficiently, that Humane Souls are not mere modification of Matter, but real and ſpiritual Subſtances, that have as true an Exiſtence, as our very Bodies themſelves. Now no man, as I conceive, can ſeriouſly think, that his own Soul hath exiſted from all Eternity. He cannot believe the Stuff or Materials of his Soul to have been eternal, and the Soul to have been made up of them at the time of his conception. For a Humane Soul is no compound Being; 'tis not made of Particles, as our Bodies are; but 'tis one ſimple homogeneous Eſſence: Neither can he think, that the Perſonality of his Soul with its Faculties inherent in it has exiſted eternally; this is againſt common Senſe; and it needs no Refutation. Nay, though a Man could be ſo extravagant, as to hold this Aſſertion; That his Soul, his perſonal ſelf, has been from

from everlaſting; yet even this in the iſſue would be deſtructive to Atheiſm; ſince it ſuppoſes an eternal Being, endued with Underſtanding and Wiſdom. We will take it then as a thing confeſſed, That the Immaterial Souls of Men have been produced out of Nothing. But if God hath actually created thoſe intelligent Subſtances, that have ſuch Nobility and Excellency of Being above brute ſenſeleſs Matter; 'tis pervicaciouſneſs to deny, that he created Matter alſo: unleſs they'll ſay, neceſſary Exiſtence is included in the very Eſſence and Idea of Matter.

But Matter doth not include in its Nature a neceſſity of Exiſtence. For Humane Souls, as is proved before, have been actually created, and conſequently have not neceſſary Exiſtence included in their Eſſence. Now can any man believe, that his ſpiritual Soul, that underſtands, and judges, and invents; endowed with thoſe Divine Faculties of Senſe, Memory and Reaſon; hath a dependent and precarious Being created and preſerved by another; while the Particles of this dead Ink and Paper have been neceſſarily eternal and uncreated? 'Tis againſt natural reaſon; and no one while he contemplates an individual Body, can diſcern that neceſſity of its Exiſtence. But men have been taught to believe, that Extenſion or Space, and Body are both the

ſelf-ſame thing. So that becauſe they cannot imagine, how Space can either begin or ceaſe to exiſt; they preſently conclude, that extended infinite Mat-
Serm. VII. ter muſt needs be eternal. But I ſhall fully prove hereafter, that Body and Space or Diſtance are quite different things, and that a Vacuity is interſperſed among the Particles of Matter, and ſuch a one as hath a vaſtly larger Extenſion, than all the Matter of the Univerſe. Which now being ſuppoſed; they ought to abſtract their Imagination from that falſe infinite Extenſion, and conceive one Particle of Matter, ſurrounded on all ſides with vacuity, and contiguous to no other Body. And whereas formerly they fanſied an immenſe boundleſs Space, as an homogeneous One; which great Individual they believed might deſerve the Attribute of neceſſary Exiſtence: Let them now pleaſe to imagine one ſolitary Atom, that hath no dependence on the reſt of the World; and is no more ſuſtained in Being by other Matter, than it could be created by it; and then I would ask the queſtion, whether this poor Atom, ſluggiſh and unactive as it is, doth involve Neceſſity of Exiſtence, the firſt and higheſt of all perfections, in its particular nature and notion? I dare preſume for the Negative in the judg-
Lucret. Lib. I. ments of all ſerious men. And I obſerve the *Epicureans* take much pains to convince us, that in natu-

ral

ral corruptions and diſſolutions, Atoms are not reduc'd to Nothing; which ſurely would be needleſs, if the very Idea of Atoms imported Self-exiſtence. And yet if one Atom do not include ſo much in its Notion and Eſſence; all Atoms put together, that is, all the Matter of the Univerſe can not include it. So that upon the whole matter, ſince Creation is no contradiction; ſince God hath certainly created nobler Subſtances than Matter; and ſince Matter is not neceſſarily eternal; it is moſt reaſonable to believe, that the eternal and Self-exiſtent God created the material World, and produced it out of Nothing.

And then as to the laſt Propoſition, that Motion as an Attribute or Property of Matter cannot have been from Eternity. That we may wave ſome Metaphyſical Arguments, which demonſtrate that Local Motion cannot be poſitively eternal; we ſhall only obſerve in two Words; That if Matter be not eſſentially eternal, as we have ſhewed before; much leſs can Motion be, that is but the adjunct and accident of it. Nay though we ſhould concede an Eternity to Matter; yet why muſt Motion be coæval with it? which is not only not inherent and eſſential to Matter; but may be produced and deſtroyed at the pleaſure of free Agents: both which are flatly repugnant to an eternal and neceſſary Duration.

Duration. I am aware, how ſome have aſſerted that the ſame quantity of Motion is always kept up in the World; which may ſeem to favour the Opinion of its infinite Duration: but that Aſſertion doth ſolely depend upon an abſolute *Plenum*; which being refuted in my next Diſcourſe, it will then appear how abſurd and falſe that conceit is, about the ſame quantity of Motion; how eaſily diſproved from that Power in Humane Souls to excite Motion when they pleaſe, and from the gradual increaſe of Men and other Animals, and many Arguments beſides. Therefore let this alſo be concluded, That Motion has not been eternal in an infinite paſt Duration: Which was the laſt thing to be proved.

A CONFUTATION OF ATHEISM FROM THE *Origin and Frame of the World.*

PART II.

The *Seventh* SERMON preached *Novemb.*7.1692.

Acts XIV. 15, *&c.*

That ye ſhould turn from theſe vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times paſt ſuffer'd all Nations to walk in their own ways. Nevertheleſs, he left not himſelf without witneſs, in that he did good, and gave us Rain from Heaven, and fruitfull Seaſons, filling our hearts with Food and Gladneſs.

WHen we firſt enter'd upon this Topic, the demonſtration of God's Exiſtence from the Origin and Frame of the World, we offer'd to prove four Propoſitions.

1. That

1. That this preſent Syſtem of Heaven and Earth cannot poſſibly have ſubſiſted from all Eternity.

2. That Matter conſider'd generally, and abſtractly from any particular Form and Concretion, cannot poſſibly have been eternal: Or, if Matter could be ſo; yet Motion cannot have coexiſted with it eternally, as an inherent property and eſſential attribute of Matter. Theſe two we have already eſtabliſhed in the preceding Diſcourſe; we ſhall now ſhew in the third place,

3. That, though we ſhould allow the Atheiſts, that Matter and Motion may have been from everlaſting; yet if (as they now ſuppoſe) there were once no Sun, nor Stars, nor Earth, nor Planets; but the Particles, that now conſtitute them, were diffuſed in the mundane Space in manner of a Chaos without any concretion or coalition; thoſe diſperſed Particles could never of themſelves by any kind of Natural motion, whether call'd Fortuitous or Mechanical, have conven'd into this preſent or any other like Frame of Heaven and Earth.

I. And firſt as to that ordinary Cant of illiterate and puny Atheiſts, the *fortuitous or caſual Concurſe of Atoms*, that compendious and eaſie Diſpatch of the moſt important and difficult affair, the Formation of a World; (beſides that in our next undertaking it will be refuted all along) I ſhall now briefly diſpatch

diſpatch it, from what hath been formerly ſaid concerning the true notions of Fortune and Chance. Whereby it is evident, that in the Atheiſtical Hypotheſis of the World's production, Fortuitous and Mechanical muſt be the ſelf-ſame thing. Becauſe *Fortune* is no real entity nor phyſical eſſence, but a mere relative ſignification, denoting only this; That ſuch a thing ſaid to fall out by Fortune, was really effected by material and neceſſary Cauſes; but the Perſon, with regard to whom it is called Fortuitous, was ignorant of thoſe Cauſes or their tendencies, and did not deſign or foreſee ſuch an effect. This is the only allowable and genuine notion of the word Fortune. But thus to affirm, that the World was made *fortuitouſly*, is as much as to ſay, That before the World was made, there was ſome Intelligent Agent or Spectator; who deſigning to do ſomething elſe, or expecting that ſomething elſe would be done with the Materials of the World, there were ſome occult and unknown motions and tendencies in Matter, which mechanically formed the World beſide his deſign or expectation. Now the Atheiſts, we may preſume, will be loth to aſſert a fortuitous Formation in this proper ſenſe and meaning; whereby they will make Underſtanding to be older than Heaven and Earth. Or if they ſhould ſo aſſert it; yet, unleſs they will affirm that Serm. V. p. 6, 7.

the Intelligent Agent did diſpoſe and direct the inanimate Matter, (which is what we would bring them to) they muſt ſtill leave their Atoms to their mechanical Affections; not able to make one ſtep toward the production of a World beyond the neceſſary Laws of Motion. It is plain then, that *Fortune*, as to the matter before us, is but a ſynonymous word with Nature and Neceſſity. It remains that we examine the adequate meaning of *Chance*; which properly ſignifies, That all events called Caſual, among inanimate Bodies, are mechanically and naturally produced according to the determinate figures and textures and motions of thoſe Bodies; with this negation only, That thoſe inanimate Bodies are not conſcious of their own operations, nor contrive and caſt about how to bring ſuch events to paſs. So that thus to ſay, that the World was made *caſually* by the concourſe of Atoms, is no more than to affirm, that the Atoms compoſed the World mechanically and fatally; only they were not ſenſible of it, nor ſtudied and conſider'd about ſo noble an undertaking. For if Atoms formed the World according to the eſſential properties of Bulk, Figure and Motion, they formed it *mechanically*; and if they formed it mechanically without perception and deſign, they formed it *caſually*. So that this negation of Conſciouſneſs being all that the notion

Serm. V. p. 12, 13.

of

of Chance can add to that of Mechaniſm; We, that do not diſpute this matter with the Atheiſts, nor believe that Atoms ever acted by Counſel and Thought, may have leave to conſider the ſeveral names of *Fortune* and *Chance* and *Nature* and *Mechaniſm*, as one and the ſame Hypotheſis. Wherefore once for all to overthrow all poſſible Explications which Atheiſts have or may aſſign for the formation of the World, we will undertake to evince this following Propoſition.

II. That the Atoms or Particles which now conſtitute Heaven and Earth, being once ſeparate and diffuſed in the Mundane Space, like the ſuppoſed *Chaos*, could never *without a God by their Mechanical affections* have convened into this preſent Frame of Things or any other like it.

Which that we may perform with the greater clearneſs and conviction; it will be neceſſary, in a diſcourſe about the Formation of the World, to give you a brief account of ſome of the moſt principal and ſyſtematical *Phænomena*, that occur in the World now that it is formed.

(1.) The moſt conſiderable *Phænomenon* belonging to Terreſtrial Bodies is the general action of *Gravitation*, whereby All known Bodies in the vicinity of the Earth do tend and preſs toward its Center; not only ſuch as are ſenſibly and evidently

Heavy, but even thoſe that are comparatively the Lighteſt, and even in their proper place, and natural Elements, (as they uſually ſpeak) as Air gravitates even in Air, and Water in Water. This hath been demonſtrated and experimentally proved beyond contradiction, by ſeveral ingenious Perſons of the preſent Age, but by none ſo perſpicuouſly and copiouſly and accurately, as by the Honourable Founder of this Lecture in his incomparable Treatiſes of the *Air* and *Hydroſtaticks*.

Mr. *Boyle's* Phyſicom. Exp. of Air Hydroſtat. Paradoxes.

(2.) Now this is the conſtant Property of *Gravitation*; That the weight of all Bodies around the Earth is ever proportional to the Quantity of their Matter: As for inſtance, a Pound weight (examin'd Hydroſtatically) of all kinds of Bodies, though of the moſt different forms and textures, doth always contain an equal quantity of ſolid Maſs or corporeal Subſtance. This is the ancient Doctrine of the *Epicurean* Phyſiology, then and ſince very probably indeed, but yet precariouſly aſſerted: But it is lately demonſtrated and put beyond controverſie by that very excellent and divine Theoriſt Mr. *Iſaac Newton*, to whoſe moſt admirable ſagacity and induſtry we ſhall frequently be obliged in this and the following Diſcourſe.

Lucret. lib. 1.

Newton Philoſ Natur. Princ. Math. lib. 3. prop. 6.

I will not entertain this Auditory with an account of the Demonſtration; but referring the Curious to the

the Book it ſelf for full ſatisfaction, I ſhall now proceed and build upon it as a Truth ſolidly eſtabliſhed, *That all Bodies weigh according to their Matter*; provided only that the compared Bodies be at equal diſtances from the Center toward which they weigh. Becauſe the further they are removed from the Center, the lighter they are: decreaſing gradually and uniformly in weight, in a duplicate proportion to the Increaſe of the Diſtance.

(3.) Now ſince Gravity is found proportional to the Quantity of Matter, there is a manifeſt Neceſſity of admitting a *Vacuum*, another principal Doctrine of the *Atomical* Philoſophy. Becauſe if there were every where an abſolute plenitude and denſity without any empty pores and interſtices between the Particles of Bodies, then all Bodies of equal dimenſions would contain an equal Quantity of Matter; and conſequently, as we have ſhew'd before, would be equally ponderous: ſo that Gold, Copper, Stone, Wood, &c. would have all the ſame ſpecifick weight; which Experience aſſures us they have not: neither would any of them deſcend in the Air, as we all ſee they do; becauſe, if all Space was Full, even the Air would be as denſe and ſpecifically as heavy as they. If it be ſaid, that, though the difference of ſpecifick Gravity may proceed from variety of Texture, the lighter Bodies being of a more looſe:

looſe and porous compoſition, and the heavier more denſe and compact; yet an æthereal ſubtile Matter, which is in a perpetual motion, may penetrate and pervade the minuteſt and inmoſt Cavities of the cloſeſt Bodies, and adapting it ſelf to the figure of every Pore, may adequately fill them; and ſo prevent all vacuity, without increaſing the weight: To this we anſwer; That that ſubtile Matter it ſelf muſt be of the ſame Subſtance and Nature with all other Matter, and therefore It alſo muſt weigh proportionally to its Bulk; and as much of it as at any time is comprehended within the Pores of a particular Body muſt gravitate jointly with that Body; ſo that if the Preſence of this æthereal Matter made an abſolute Fulneſs, all Bodies of equal dimenſions would be equally heavy: which being refuted by experience, it neceſſarily follows, that there is a Vacuity; and that (notwithſtanding ſome little objections full of cavil and ſophiſtry) mere and ſimple Extenſion or Space hath a quite different nature and notion from real Body and impenetrable Subſtance.

(4.) This therefore being eſtabliſhed; in the next place it's of great conſequence to our preſent enquiry, if we can make a computation, How great is the whole Summ of the Void ſpaces in our ſyſtem, and what proportion it bears to the corporeal ſubſtance.

ſtance. By many and accurate Trials it manifeſtly appears, that Refined Gold, the moſt ponderous of known Bodies, (though even that muſt be allowed to be porous too, becauſe it's diſſoluble in *Mercury* and *Aqua Regis* and other Chymical Liquors; and becauſe it's naturally a thing impoſſible, that the Figures and Sizes of its conſtituent Particles ſhould be ſo juſtly adapted, as to touch one another in every Point,) I ſay, Gold is in ſpecifick weight to common Water as 19 to 1; and Water to common Air as 850 to 1: ſo that Gold is to Air as 16150 to 1. Whence it clearly appears, ſeeing Matter and Gravity are always commenſurate, that (though we ſhould allow the texture of Gold to be intirely cloſe without any vacuity) the ordinary Air in which we live and reſpire is of ſo thin a compoſition, that 16149 parts of its dimenſions are mere emptineſs and Nothing; and the remaining One only material and real ſubſtance. But if Gold it ſelf be admitted, as it muſt be, for a porous Concrete, the proportion of Void to Body in the texture of common Air will be ſo much the greater. And thus it is in the loweſt and denſeſt region of the Air near the ſurface of the Earth, where the whole Maſs of Air is in a ſtate of violent compreſſion, the inferior being preſs'd and conſtipated by the weight of all the incumbent. But, ſince the Air is now certainly

Mr. *Boyle* of Air and Poroſity of Bodies.

Mr. *Boyle* ibid.

tainly known to conſiſt of elaſtick or ſpringy Particles, that have a continual tendency and endeavour to expand and diſplay themſelves; and the dimenſions, to which they expand themſelves, to be reciprocally as the Compreſſion; it follows, that the higher you aſcend in it, where it is leſs and leſs compreſs'd by the ſuperior Air, the more and more it is rarified. So that at the height of a few miles from the ſurface of the Earth, it is computed to have ſome million parts of empty ſpace in its texture for one of ſolid Matter. And at the height of one Terreſtrial Semid. (not above 4000 miles) the Æther is of that wonderfull tenuity, that by an exact calculation, if a ſmall Sphere of common Air of one Inch Diameter (already 16149 parts Nothing) ſhould be further expanded to the thinneſs of that Æther, it would more than take up the vaſt Orb of *Saturn*, which is many million million times bigger than the whole Globe of the Earth. And yet the higher you aſcend above that region, the Rarefaction ſtill gradually increaſes without ſtop or limit: ſo that, in a word, the whole Concave of the Firmament, except the Sun and Planets and their Atmoſpheres, may be conſider'd as a mere Void. Let us allow then, that all the Matter of the Syſtem of our Sun may be 50000 times as much as the whole Maſs of the Earth; and we appeal to Aſtronomy,

Newton Philoſ. Nat. Principia. Math. p. 503.

nomy, if we are not liberal enough and even prodigal in this conceſſion. And let us ſuppoſe further, that the whole Globe of the Earth is intirely ſolid and compact without any void interſtices; notwithſtanding what hath been ſhewed before, as to the texture of Gold it ſelf. Now though we have made ſuch ample allowances; we ſhall find, notwithſtanding, that the void Space of our Syſtem is immenſly bigger than all its corporeal Maſs. For, to procede upon our ſuppoſition, that all the Matter within the Firmament is 50000 times bigger than the ſolid Globe of the Earth; if we aſſume the Diameter of the *Orbis Magnus* (wherein the Earth moves about the Sun) to be only 7000 times as big as the Diameter of the Earth (though the lateſt and moſt accurate Obſervations make it thrice 7000) and the Diameter of the Firmament to be only 100000 times as long as the Diameter of the *Orbis Magnus* (though it cannot poſſibly be leſs than that, but may be vaſtly and unſpeakably bigger) we muſt pronounce, after ſuch large conceſſions on that ſide, and ſuch great abatements on ours, That the Summ of empty Spaces within the Concave of the Firmament is 6860 million million million times bigger than All the Matter contain'd in it.

Now from hence we are enabled to form a right conception and imagination of the ſuppoſed Chaos;

and then we may proceed to determine the controverſie with more certainty and ſatisfaction; whether a World like the Preſent could poſſibly without a Divine Influence be formed in it or no?

(1.) And *firſt*, becauſe every Fixt Star is ſuppoſed by Aſtronomers to be of the ſame Nature with our Sun; and each may very poſſibly have Planets about them, though by reaſon of their vaſt diſtance they be inviſible to Us: we will aſſume this reaſonable ſuppoſition, That the ſame proportion of Void Space to Matter, which is found in our Sun's Region within the Sphere of the Fixt Stars, may competently well hold in the whole Mundane Space. I am aware, that in this computation we muſt not aſſign the whole Capacity of that Sphere for the Region of our Sun; but allow half of its Diameter for the *Radii* of the ſeveral Regions of the next Fixt Stars. So that diminiſhing our former number, as this laſt conſideration requires; we may ſafely affirm from certain and demonſtrated Principles, That the empty Space of our Solar Region (comprehending half of the Diameter of the Firmament) is 8575 hundred thouſand million million times more ample than all the corporeal ſubſtance in it. And we may fairly ſuppoſe, that the ſame proportion may hold through the whole Extent of the Univerſe.

(2.) And

(2.) And *ſecondly* as to the ſtate or condition of Matter before the World was a-making, which is compendiouſly expreſt by the word *Chaos*; they muſt either ſuppoſe, that the Matter of our Solar Syſtem was *evenly* or well-nigh evenly diffuſed through the Region of the Sun, which would repreſent a particular Chaos: or that all Matter univerſally was ſo ſpread through the whole Mundane Space; which would truly exhibit a General Chaos; no part of the Univerſe being rarer or denſer than another. And this is agreeable to the ancient Deſcription of Chaos, That * *the Heavens and Earth had* μίαν ἰδέαν, μίαν μορφὴν, *one form*, one texture and conſtitution: which could not be, unleſs all the Mundane Matter were *uniformly* and evenly diffuſed. 'Tis indifferent to our Diſpute, whether they ſuppoſe it to have continued a long time or very little in the ſtate of Diffuſion. For if there was but one ſingle Moment in all paſt Eternity, when Matter was ſo diffuſed: we ſhall plainly and fully prove, that it could never have convened afterwards into the preſent Frame and Order of Things.

* Diod. Sicul. lib. 1. Κατὰ τὴν ἐξ ἀρχῆς τῶν ὅλων σύστασιν μίαν ἔχειν ἰδέαν ὑρανόντε καὶ γῆν, μεμιγμένης αὐτῶν τῆς φύσεως. Apoll. Rhodius lib. 1. Ἤειδεν δ' ὡς γαῖα καὶ ὑρανὸς ἠδὲ θάλασσα, Τὸ πρὶν ἐπ' ἀλλήλοισι μιῇ συναρηρότα μορφῇ.

(3.) It is evident from what we have newly prov'd, that in the ſuppoſition of ſuch a Chaos or ſuch an even diffuſion either of the whole Mundane

Matter or that of our Syſtem (for it matters not which they aſſume) every ſingle Particle would have a Sphere of Void Space around it 8575 hundred thouſand million million times bigger than the dimenſions of that Particle. Nay further, though the proportion already appear ſo immenſe; yet every ſingle Particle would really be ſurrounded with a Void ſphere Eight times as capacious as that newly mention'd; its Diameter being compounded of the Diameter of the Proper ſphere, and the Semi-diameters of the contiguous Spheres of the neighbouring Particles. From whence it appears, that every Particle (ſuppoſing them globular or not very oblong) would be above Nine million times their own length from any other Particle. And moreover in the whole Surface of this Void ſphere there can only Twelve Particles be *evenly* placed, as the Hypotheſis requires; that is, at equal Diſtances from the Central one and from each other. So that if the Matter of our Syſtem or of the Univerſe was equally diſperſed, like the ſuppoſed Chaos; the reſult and iſſue would be, not only that every Atom would be many million times its own length diſtant from any other: but if any One ſhould be moved mechanically (without direction or attraction) to the limit of that diſtance; 'tis above a hundred million millions Odds to an Unit, that it would not

not ſtrike upon any other Atom, but glide through an empty interval without any contact.

(4.) 'Tis true, that while I calculate theſe Meaſures, I ſuppoſe all the Particles of Matter to be at abſolute reſt among themſelves, and ſituated in an exact and mathematical evenneſs; neither of which is likely to be allowed by our Adverſaries, who not admitting the former, but aſſerting the eternity of Motion, will conſequently deny the latter alſo: becauſe in the very moment that Motion is admitted in the Chaos, ſuch an exact evenneſs cannot poſſibly be preſerved. But this I do, not to draw any argument againſt them from the Univerſal Reſt or accurately equal diffuſion of Matter; but only that I may better demonſtrate the great Rarity and Tenuity of their imaginary Chaos, and reduce it to computation. Which computation will hold with exactneſs enough, though we allow the Particles of the Chaos to be variouſly moved, and to differ ſomething in ſize and figure and ſituation. For if ſome Particles ſhould approach nearer each other than in the former Proportion; with reſpect to ſome other Particles they would be as much remoter. So that notwithſtanding a ſmall diverſity of their Poſitions and Diſtances, the whole Aggregate of Matter, as long as it retain'd the name and nature of Chaos, would retain well-nigh an uniform tenuity of Texture, and may

may be conſider'd as an homogeneous Fluid. As ſeveral Portions of the ſame ſort of Water are reckoned to be of the ſame ſpecifick gravity; tho' it be naturally impoſſible that every Particle and Pore of it, conſider'd Geometrically, ſhould have equal ſizes and dimenſions.

We have now repreſented the true ſcheme and condition of the Chaos; how all the Particles would be diſunited; and what vaſt intervals of empty Space would lie between each. To form a Syſtem therefore, 'tis neceſſary that theſe ſquander'd Atoms ſhould convene and unite into great and compact Maſſes, like the Bodies of the Earth and Planets. Without ſuch a coalition the diffuſed Chaos muſt have continued and reign'd to all eternity. But how could Particles ſo widely diſperſed combine into that cloſeneſs of Texture? Our Adverſaries can have only theſe two ways of accounting for it.

Firſt, By the Common Motion of Matter, proceeding from external Impulſe and Conflict (without attraction) by which every Body moves uniformly in a direct line according to the determination of the impelling force. For, they may ſay, the Atoms of the Chaos being variouſly moved according to this Catholick Law, muſt needs knock and interfere; by which means ſome that have convenient figures for mutual coherence might chance to ſtick together,

ther, and others might join to thoſe, and ſo by degrees ſuch huge Maſſes might be formed, as afterwards became Suns and Planets: or there might ariſe ſome vertiginous Motions or Whirlpools in the Matter of the Chaos; whereby the Atoms might be thruſt and crowded to the middle of thoſe Whirlpools, and there conſtipate one another into great ſolid Globes, ſuch as now appear in the World.

Or *ſecondly* by mutual Gravitation or Attraction. For they may aſſert, that Matter hath inherently and eſſentially ſuch an internal energy, whereby it inceſſantly tends to unite it ſelf to all other Matter: ſo that ſeveral Particles, placed in a Void ſpace, at any diſtance whatſoever would without any external impulſe ſpontaneouſly convene and unite together. And thus the Atoms of the Chaos, though never ſo widely diffuſed, might by this innate property of Attraction ſoon aſſemble themſelves into great ſphærical Maſſes, and conſtitute Syſtems like the preſent Heaven and Earth.

This is all that can be propoſed by Atheiſts, as an efficient cauſe of the World. For as to the *Epicurean* Theory, of Atoms deſcending down an infinite ſpace by an inherent principle of Gravitation, which tends not toward other Matter, but toward a *Vacuum* or Nothing; and verging from the Perpendicular * *no body knows why, nor when, nor where*; 'tis ſuch miſera-

* Lucret. *Nec regione loci certa, nec tempore certo.*

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ble abſurd ſtuff, ſorepugnant to it ſelf, and ſo contrary to the known Phænomena of Nature, though it contented ſupine unthinking Atheiſts for a thouſand years together; that we will not now honour it with a ſpecial refutation. But what it hath common with the other Explications, we will fully confute together with Them in theſe three Propoſitions.

(1.) That by Common Motion (without attraction) the diſſever'd Particles of the Chaos could never make the World; could never convene into ſuch great compact Maſſes, as the Planets now are; nor either acquire or continue ſuch Motions, as the Planets now have.

(2.) That ſuch a mutual Gravitation or ſpontaneous Attraction can neither be inherent and eſſential to Matter; nor ever ſupervene to it, unleſs impreſs'd and infuſed into it by a Divine Power.

(3.) That though we ſhould allow ſuch Attraction to be natural and eſſential to all Matter; yet the Atoms of a Chaos could never ſo convene by it, as to form the preſent Syſtem: or if they could form it, it could neither acquire ſuch Motions, nor continue permanent in this ſtate, without the Power and Providence of a Divine Being.

I. And firſt, that by Common Motion the Matter of Chaos could never convene into ſuch Maſſes, as the Planets now are. Any man, that conſiders the

the ſpacious void intervals of the Chaos, how immenſe they are in proportion to the bulk of the Atoms, will hardly induce himſelf to believe, that Particles ſo widely diſſeminated could ever throng and crowd one another into a cloſe and compact texture. He will rather conclude, that thoſe few that ſhould happen to claſh, might rebound after the colliſion; or if they cohered, yet by the next conflict with other Atoms might be ſeparated again, and ſo on in an eternal viciſſitude of Faſt and Looſe, without ever conſociating into the huge condenſe Bodies of Planets; ſome of whoſe Particles upon this ſuppoſition muſt have travell'd many millions of Leagues through the gloomy regions of Chaos, to place themſelves where they now are. But then how rarely would there be any claſhing at all; how very rarely in compariſon to the number of Atoms? The whole multitude of them generally ſpeaking, might freely move and rove for ever with very little occurring or interfering. Let us conceive two of the neareſt Particles according to our former Calculation; or rather let us try the ſame proportions in another Example, that will come eaſier to the Imagination. Let us ſuppoſe two Ships, fitted with durable Timber and Rigging, but without Pilot or Mariners, to be placed in the vaſt *Atlantick* or the *Pacifique* Ocean, as far a-

ſunder as may be. How many thouſand years might expire, before thoſe ſolitary Veſſels ſhould happen to ſtrike one againſt the other? But let us imagine the Space yet more ample, even the whole face of the Earth to be cover'd with Sea, and the two Ships to be placed in the oppoſite Poles: might not they now move long enough without any danger of claſhing? And yet I find, that the two neareſt Atoms in our evenly diffuſed Chaos have ten thouſand times leſs proportion to the two Void circular Planes around them, than our two Ships would have to the whole Surface of the Deluge. Let us aſſume then another Deluge ten thouſand times larger than *Noah's*. Is it not now utterly incredible, that our two Veſſels, placed there Antipodes to each other, ſhould ever happen to concur? And yet let me add, that the Ships would move in one and the ſame Surface; and conſequently muſt needs encounter, when they either advance towards one another in direct lines, or meet in the interſection of croſs ones; but the Atoms may not only fly ſide-ways, but over likewiſe and under each other: which makes it many million times more improbable, that they ſhould interfere than the Ships, even in the laſt and unlikelieſt inſtance. But they may ſay, Though the Odds indeed be unſpeakable that the Atoms do not convene in any ſet number of Trials,

als, yet in an infinite Succeſſion of them may not ſuch a Combination poſſibly happen? But let them conſider, that the improbability of Caſual Hits is never diminiſhed by repetition of Trials; they are as unlikely to fall out at the Thouſandth as at the Firſt. So that in a matter of mere Chance, when there is ſo many Millions odds againſt any aſſignable Experiment; 'tis in vain to expect it ſhould ever ſucceed, even in endleſs Duration. Serm. V. p. 32.

But though we ſhould concede it to be ſimply poſſible, that the Matter of Chaos might convene into great Maſſes, like Planets: yet it's abſolutely impoſſible, that thoſe Maſſes ſhould acquire ſuch revolutions about the Sun. Let us ſuppoſe any one of thoſe Maſſes to be the Preſent Earth. Now the annual Revolution of the Earth muſt proceed (in this Hypotheſis) *either* from the Summ and Reſult of the ſeveral motions of all the Particles that formed the Earth, *or* from a new Impulſe from ſome external Matter, after it was formed. The *former* is apparently abſurd, becauſe the Particles that form'd the round Earth muſt needs convene from all points and quarters toward the middle, and would generally tend toward its Center; which would make the whole Compound to reſt in a Poiſe: or at leaſt that overplus of Motion, which the Particles of one Hemiſphere could have above the other,

would be very ſmall and inconſiderable; too feeble and languid to propell ſo vaſt and ponderous a Body with that prodigious velocity. And *ſecondly*, 'tis impoſſible, that any external Matter ſhould impell that compound Maſs, after it was formed. 'Tis manifeſt, that nothing elſe could impell it, unleſs the Æthereal Matter be ſuppoſed to be carried about the Sun like a *Vortex* or Whirlpool, as a Vehicle to convey it and the reſt of the Planets. But this is refuted from what we have ſhewn above, that thoſe Spaces of the Æther may be reckon'd a mere Void, the whole Quantity of their Matter ſcarce amounting to the weight of a Grain. 'Tis refuted alſo from Matter of Fact in the Motion of Comets; which, as often as they are viſible to Us, are in the Region of our Planets; and there are obſerved to move, ſome in quite contrary courſes to Theirs, and ſome in croſs and oblique ones, in Planes inclined to the Plane of the Ecliptick in all kinds of Angles: which firmly evinces, that the Regions of the Æther are empty and free, and neither reſiſt nor aſſiſt the Revolutions of Planets. But moreover there could not poſſibly ariſe in the Chaos any *Vortices* or Whirlpools at all; either to form the Globes of the Planets, or to revolve them when formed. 'Tis acknowledged by all, that inanimate unactive Matter moves always in a ſtreight Line, nor

Newton ibidem p. 480.

nor ever reflects in an Angle, nor bends in a Circle (which is a continual reflexion) unleſs *either* by ſome external Impulſe, that may divert it from the direct motion, *or* by an intrinſeck Principle of Gravity or Attraction that may make it deſcribe a curve line about the attracting Body. But this latter Cauſe is not now ſuppoſed: and the former could never beget Whirlpools in a Chaos of ſo great a Laxity and Thinneſs. For 'tis matter of certain experience and univerſally allowed, that all Bodies moved circularly have a perpetual endeavour to recede from the Center, and every moment would fly out in right Lines, if they were not violently reſtrain'd and kept in by contiguous Matter. But there is no ſuch reſtraint in the ſuppoſed Chaos, no want of empty room there; no poſſibility of effecting one ſingle Revolution in way of a *Vortex*, which neceſſarily requires (if Attraction be not ſuppoſed) either an abſolute Fulneſs of Matter, or a pretty cloſe Conſtipation and mutual Contact of its Particles.

And for the ſame reaſon 'tis evident, that the Planets could not continue their Revolutions about the Sun; though they could poſſibly acquire them. For to drive and carry the Planets in ſuch Orbs as they now deſcribe, that Æthereal Matter muſt be compact and denſe, as denſe as the very Planets themſelves: otherwiſe they would certainly fly out in Spiral

Spiral Lines to the very circumference of the *Vortex*. But we have often inculcated, that the wide Tracts of the Æther may be reputed as a mere extended Void. So that there is nothing (in this Hypotheſis) that can retain and bind the Planets in their Orbs for one ſingle moment; but they would immediately deſert them and the neighbourhood of the Sun, and vaniſh away in Tangents to their ſeveral Circles into the Abyſs of Mundane Space.

II. Secondly we affirn, that mutual Gravitation or ſpontaneous Attraction cannot poſſibly be innate and eſſential to Matter. By Attraction we do not here underſtand what is improperly, though vulgarly, called ſo, in the operations of drawing, ſucking, pumping, *&c.* which is really Pulſion and Truſion; and belongs to that Common Motion, which we have already ſhewn to be inſufficient for the formation of a World. But we now mean (as we have explain'd it before) ſuch a power and quality, whereby all parcels of Matter would mutually attract or mutually tend and preſs to all others; ſo that, for inſtance, two diſtant Atoms *in vacuo* would ſpontaneouſly convene together without the impulſe of external Bodies.

Now *firſt* we ſay, if our Atheiſts ſuppoſe this power to be inherent and eſſential to Matter; they overthrow their own Hypotheſis: there could never be

be a Chaos at all upon theſe terms, but the preſent form of our Syſtem muſt have continued from all Eternity; againſt their own Suppoſition, and what we have proved in our Laſt. For if they affirm, that there might be a Chaos notwithſtanding innate Gravity; then let them aſſign any Period though never ſo remote, when the diffuſed Matter might convene. They muſt confeſs, that before that aſſigned Period Matter had exiſted eternally, inſeparably endued with this principle of Attraction; and yet had never attracted nor convened before, in that infinite duration: which is ſo monſtrous an abſurdity, as even They will bluſh to be charged with. But ſome perhaps may imagin, that a former Syſtem might be diſſolved and reduced to a Chaos, from which the preſent Syſtem might have its Original, as that Former had from another, and ſo on; new Syſtems having grown out of old ones in infinite Viciſſitudes from all paſt eternity. But we ſay, that in the Suppoſition of innate Gravity no Syſtem at all could be diſſolved. For how is it poſſible, that the Matter of ſolid Maſſes like Earth and Planets and Stars ſhould fly up from their Centers againſt its inherent principle of mutual Attraction, and diffuſe it ſelf in a Chaos? This is abſurder than the other: That only ſuppoſed innate Gravity not to be exerted; This makes it to be defeated, and to act

Vide Serm. VI. & Ser. VIII.

act contrary to its own Nature. So that upon all accounts this eſſential power of Gravitation or Attraction is irreconcilable wirh the Atheiſt's own Doctrine of a Chaos.

And *ſecondly* 'tis repugnant to Common Senſe and Reaſon. 'Tis utterly unconceivable, that inanimate brute Matter, without the mediation of ſome Immaterial Being, ſhould operate upon and affect other Matter without mutual Contact; that diſtant Bodies ſhould act upon each other through a *Vacuum* without the intervention of ſomething elſe by and through which the action may be conveyed from one to the other. We will not obſcure and perplex with multitude of words, what is ſo clear and evident by its own light, and muſt needs be allowed by all, that have competent uſe of Thinking, and are initiated into, I do not ſay the Myſteries, but the plaineſt Principles of Philoſophy. Now mutual Gravitation or Attraction, in our preſent acception of the Words, is the ſame thing with This; 'tis an operation or virtue or influence of diſtant Bodies upon each other through an empty Interval, without any *Effluvia* or Exhalations or other corporeal Medium to convey and tranſmit it. This Power therefore cannot be innate and eſſential to Matter. And if it be not eſſential; it is conſequently moſt manifeſt, ſince it doth not depend upon

on Motion or Reſt or Figure or Poſition of Parts, which are all the ways that Matter can diverſify it ſelf, that it could never ſupervene to it, unleſs impreſs'd and infus'd into it by an immaterial and divine Power.

We have proved, that a Power of mutual Gravitation, without contact or impulſe, can in no-wiſe be attributed to mere Matter: or if it could; we ſhall preſently ſhew, that it would be wholly unable to form the World out of *Chaos*. What then if it be made appear, that there is really ſuch a Power of Gravity, which cannot be aſcribed to mere Matter, perpetually acting in the conſtitution of the preſent Syſtem? This would be a new and invincible Argument for the Being of God: being a direct and poſitive proof, that an immaterial living Mind doth inform and actuate the dead Matter, and ſupport the Frame of the World. I will lay before you ſome certain *Phænomena* of Nature; and leave it to your conſideration from what Principle they can proceed. 'Tis demonſtrated, That the Sun, Moon and all the Planets do reciprocally gravitate one toward another: that the Gravitating power of each of them is exactly proportional to their Matter, and ariſes from the ſeveral Gravitations or Attractions of all the individual Particles that compoſe the whole Maſs: that all Matter near the Sur-

face of the Earth, (and ſo in all the Planets) doth not only gravitate downwards, but upwards alſo and ſide-ways and toward all imaginable Points; though the Tendency downward be prædominant and alone diſcernible, becauſe of the Greatneſs and Nearneſs of the attracting Body, the Earth: that every Particle of the whole Syſtem doth attract and is attracted by all the reſt, All operating upon All: that this *Univerſal Attraction or Gravitation* is an inceſſant, regular and uniform Action by certain and eſtabliſh'd Laws according to Quantity of Matter and Longitude of Diſtance: that it cannot be deſtroyd nor impaired nor augmented by any thing, neither by Motion or Reſt, nor Situation nor Poſture, nor alteration of Form, nor diverſity of Medium: that it is not a Magnetical Power, nor the effect of a Vortical Motion; thoſe common attempts toward the Explication of Gravity: Theſe things, I ſay, are fully demonſtrated, as matters of Fact, by that very ingenious Author, whom we cited before. Now how is it poſſible that theſe things ſhould be effected by any Material and Mechanical Agent? We have evinced, that mere Matter cannot operate upon Matter without mutual Contact. It remains then, that theſe Phænomena are produced *either* by the intervention of Air or Æther or other ſuch medium, that communicates the Impulſe from one Body to another;

Newton Philoſophiæ Naturalis Princ. Math. lib. III.

another; *or* by Effluvia and Spirits that are emitted from the one, and pervene to the other. We can conceive no other way of performing them Mechanically. But what impulſe or agitation can be propagated through the Æther from one Particle entombed and wedged in the very Center of the Earth to another in the Center of *Saturn*? Yet even thoſe two Particles do reciprocally affect each other with the ſame force and vigour, as they would do at the ſame diſtance in any other Situation imaginable. And becauſe the Impulſe from this Particle is not directed to That only; but to all the reſt in the Univerſe, to all quarters and regions, at once invariably and inceſſantly: to do this mechanically, the ſame phyſical Point of Matter muſt move all manner of ways equally and conſtantly in the ſame inſtant and moment; which is flatly impoſſible. But if this Particle cannot propagate ſuch Motion; much leſs can it ſend out Effluvia to all points without intermiſſion or variation; ſuch multitudes of Effluvia as to lay hold on every Atom in the Univerſe without miſſing of one. Nay every ſingle Particle of the very Effluvia (ſince they alſo attract and gravitate) muſt in this Suppoſition emit other ſecondary Effluvia all the World over; and thoſe others ſtill emit more, and ſo *in infinitum*. Now if theſe things be repugnant to Humane Reaſon; we have great reaſon to

affirm, That Univerſal Gravitation, a thing certainly exiſtent in Nature, is above all Mechaniſm and material Cauſes, and proceeds from a higher principle, a Divine energy and impreſſion.

III. Thirdly we affirm; That, though we ſhould allow, that reciprocal Attraction is eſſential to Matter; yet the Atoms of a Chaos could never ſo convene by it, as to form the preſent Syſtem; or if they could form it, yet it could neither acquire theſe Revolutions, nor ſubſiſt in the preſent condition, without the Conſervation and Providence of a Divine Being.

(1.) For firſt, if the Matter of the Univerſe, and conſequently the Space through which it's diffuſed, be ſuppoſed to be *Finite* (and I think it might be demonſtrated to be ſo; but that we have already exceeded the juſt meaſures of a Sermon), then, ſince every ſingle Particle hath an innate Gravitation toward all others, proportionated by Matter and Diſtance: it evidently appears, that the outward Atoms of the Chaos would neceſſarily tend inwards and deſcend from all quarters toward the Middle of the whole Space; for in reſpect to every Atom there would lie through the Middle the greateſt quantity of Matter and the moſt vigorous Attraction: and thoſe Atoms would there form and conſtitute one huge ſphærical Maſs; which would be the only Body

dy in the Univerſe. It is plain therefore, that upon this Suppoſition the Matter of the Chaos could never compoſe ſuch divided and different Maſſes, as the Stars and Planets of the preſent World.

But allowing our Adverſaries, that the Planets might be compoſed: yet however they could not poſſibly acquire ſuch Revolutions in Circular Orbs, or (which is all one to our preſent purpoſe) in Ellipſes very little Eccentric. For let them aſſign any place where the Planets were formed. Was it nearer to the Sun, than the preſent diſtances are? But that is notoriouſly abſurd: for then they muſt have aſcended from the place of their Formation, againſt the eſſential property of mutual Attraction. Or were each formed in the ſame Orbs, in which they now move? But then they muſt have moved from the Point of Reſt, in an horizontal Line without any inclination or deſcent. Now there is no natural Cauſe, neither Innate Gravity nor Impulſe of external Matter, that could beget ſuch a Motion. For Gravity alone muſt have carried them downwards to the Vicinity of the Sun. And that the ambient Æther is too liquid and empty, to impell them horizontally with that prodigious celerity, we have ſufficiently proved before. Or were they made in ſome higher regions of the Heavens; and from thence deſcended by their eſſential Gravity, till they all arri-

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ved at their reſpective Orbs; each with its preſent degree of Velocity, acquired by the fall? But then why did they not continue their deſcent, till they were contiguous to the Sun; whither both Mutual Attraction and Impetus carried them? What natural Agent could turn them aſide, could impell them ſo ſtrongly with a tranſverſe Side-blow againſt that tremendous Weight and Rapidity, when whole Planets were a falling? But if we ſhould ſuppoſe, that by ſome croſs attraction or other they might acquire an obliquity of deſcent, ſo as to miſs the body of the Sun, and to fall on one ſide of it: then indeed the force of their Fall would carry them quite beyond it; and ſo they might fetch a compaſs about it, and then return and aſcend by the ſame ſteps and degrees of Motion and Velocity, with which they deſcended before. Such an eccentric Motion as this, much after the manner that Comets revolve about the Sun, they might poſſibly acquire by their innate principle of Gravity: but circular Revolutions in concentric Orbs about the Sun or other central Body could in no-wiſe be attain'd without the power of the Divine Arm. For the Caſe of the Planetary Motions is this. Let us conceive all the Planets to be formed or conſtituted with their Centers in their ſeveral Orbs; and at once to be impreſs'd on them this Gravitating Energy toward all other Matter, and a tranſverſe Impulſe

Impulſe of a juſt quantity in each, projecting them directly in Tangents to thoſe Orbs. The Compound Motion, which ariſes from this Gravitation and Projection together, deſcribes the preſent Revolutions of the Primary Planets about the Sun, and of the Secondary about Thoſe: the Gravity prohibiting, that they cannot recede from the Centers of their Motions; and the tranſverſe Impulſe with-holding, that they cannot approach to them. Now although Gravity could be innate (which we have prov'd that it cannot be) yet certainly this projected, this tranſverſe and violent Motion can only be aſcribed to the Right hand of the *moſt high God, Creator of Heaven and Earth.*

But finally, if we ſhould grant them, that theſe Circular Revolutions could be naturally attained; or, if they will, that this very individual World in its preſent poſture and motion was actually formed out of Chaos by Mechanical Cauſes: yet it requires a Divine Power and Providence to have preſerved it ſo long in the preſent ſtate and condition. For what are the Cauſes, that preſerve the Syſtem of our Sun and his Planets; ſo that the Planets continue to move in the ſame Orbs, neither receding from the Sun, nor approaching nearer to him? We have ſhewn, that a Tranſverſe Impulſe, impreſs'd upon the Planets, retains them in their ſeveral Orbs, that they are not drawn

drawn down toward the Sun. And again, their Gravitating Powers ſo incline them towards the Sun, that they are not carried upwards beyond their due diſtance from him. Theſe two great Agents, a Tranſverſe Impulſe, and Gravity, are the Secondary Cauſes, under God, that maintain the Syſtem of Sun and Planets. Gravity we underſtand to be a conſtant Energy or Faculty, perpetually acting by certain Meaſures and naturally inviolable Laws; we ſay, a *Faculty* and Power: for we cannot conceive that the *Act* of Gravitation of this preſent Moment can propagate it ſelf or produce that of the next. But the Tranſverſe Impulſe we conceive to have been one ſingle Act. For by reaſon of the Inactivity of Matter and its inability to change its preſent State either of Moving or Reſting, that Tranſverſe Motion would from one ſingle Impulſe continue for ever equal and uniform, unleſs changed by the reſiſtance of occurring Bodies or by a Gravitating Power. So that the Planets, ſince they move Horizontally (whereby Gravity doth not alter their ſwiftneſs) and through the liquid and unreſiſting Spaces of the Heavens (where either no Bodies at all or inconſiderable ones do occur) may preſerve the ſame Velocity, which the firſt Impulſe impreſt upon them, not only for five or ſix thouſand years, but many Millions of Millions. It appears then, that if there was but One Vaſt Sun in the

the Univerſe, and all the reſt were Planets, revolving around him in Concentric Orbs, at convenient Diſtances: ſuch a Syſtem, as that, would very long endure; could it but naturally have a Principle of Mutual Attraction, and be once actually put into Circular Motions. But the Frame of the preſent World hath a quite different ſtructure: here's an innumerable multitude of Fixt Stars or Suns; all which being made up of the ſame common Matter, muſt be ſuppoſed to be equally endued with a Power of Gravitation. For if All have not ſuch a power, what is it that could make that difference between Bodies of the ſame ſort? Nothing ſurely but a Deity, could have ſo arbitrarily indued our Sun and Planets with a Power of Gravity not eſſential to Matter; while all the Fixt Stars, that are ſo many Suns, have nothing of that Power. If the Fixt Stars then are ſuppoſed to have no Power of Gravitation, 'tis a plain proof of a Divine Being. And 'tis as plain a proof of a Divine Being; if they have the Power of Gravitation. For ſince they are neither revolved about a common Center, nor have any Tranſverſe Impulſe, what is there elſe to reſtrain them from approaching toward each other, as their Gravitating Power incites them? What Natural Cauſe can overcome Nature it ſelf? What is it that holds and keeps them in fixed Stations and Intervals againſt

an inceſſant and inherent Tendency to deſert them? Nothing could hinder, but that the Outward Stars with their Syſtems of Planets muſt neceſſarily have deſcended toward the middlemoſt Syſtem of the Univerſe, whither all would be the moſt ſtrongly attracted from all parts of a Finite Space. It is evident therefore that the preſent Frame of Sun and Fixt Stars could not poſſibly ſubſiſt without the Pro-
Pſal. 148. vidence of that Almighty Deity, *who ſpake the word and they were made, who commanded and they were created; who hath made them faſt for ever and ever, and hath given them a Law, which ſhall not be broken.*

(2.) And ſecondly in the Suppoſition of an *infinite* Chaos, 'tis hard indeed to determin, what would follow in this imaginary Caſe from an innate Principle of Gravity. But to haſten to a concluſion, we will grant for the preſent, that the diffuſed Matter might convene into an infinite Number of great Maſſes at great diſtances from one another, like the Stars and Planets of this viſible part of the World. But then it is impoſſible, that the Planets ſhould naturally attain theſe circular Revolutions, either by Principle of Gravitation, or by impulſe of ambient Bodies. It is plain, here is no difference as to this; whether the World be Infinite or Finite: ſo that the ſame Arguments that we have uſed before, may be equally urged in this

this Suppoſition. And though we ſhould concede, that theſe Revolutions might be acquired, and that all were ſettled and conſtituted in the preſent State and Poſture of Things; yet, we ſay, the continuance of this Frame and Order, for ſo long a duration as the known Ages of the World, muſt neceſſarily infer the Exiſtence of God. For though the Univerſe was infinite, the now Fixt Stars could not be fixed, but would naturally convene together, and confound Syſtem with Syſtem: becauſe, all mutually attracting, every one would move whither it was moſt powerfully drawn. This, they may ſay, is indubitable in the caſe of a Finite World, where ſome Syſtems muſt needs be Outmoſt, and therefore be drawn toward the Middle: but when Infinite Syſtems ſucceed one another through an Infinite Space, and none is either inward or outward; may not all the Syſtems be ſituated in an accurate Poiſe; and, becauſe equally attracted on all ſides, remain fixed and unmoved? But to this we reply; That unleſs the very mathematical Center of Gravity of every Syſtem be placed and fixed in the very mathematical Center of the Attractive Power of all the reſt; they cannot be evenly attracted on all ſides, but muſt preponderate ſome way or other. Now he that conſiders, what a mathematical Center is, and that

Quantity is infinitely diviſible; will never be perſuaded, that ſuch an Univerſal Equilibrium ariſing from the coincidence of Infinite Centers can naturally be acquired or maintained. If they ſay; that upon the Suppoſition of Infinite Matter, every Syſtem would be infinitely, and therefore equally attracted on all ſides; and conſequently would reſt in an exact Equilibrium, be the Center of its Gravity in what Poſition ſoever: this will overthrow their very Hypotheſis. For at this rate in an *infinite Chaos* nothing at all could be formed; no Particles could convene by mutual Attraction; becauſe every one there muſt have Infinite Matter around it, and therefore muſt reſt for ever being evenly balanced between Infinite Attractions. Even the Planets upon this principle muſt gravitate no more toward the Sun, than any other way: ſo that they would not revolve in curve Lines, but fly away in direct Tangents, till they ſtruck againſt other Planets or Stars in ſome remote regions of the Infinite Space. An equal Attraction on all ſides of all Matter is juſt equal to no Attraction at all: and by this means all the Motion in the Univerſe muſt proceed from external Impulſe alone; which we have proved before to be an incompetent Cauſe for the Formation of a World.

And

And now, O thou almighty and eternal Creator, *having considered the Heavens the work of thy fingers, the Moon and the Stars which thou hast ordained,* with all the company of Heaven we laud and magnify thy glorious Name, evermore praising thee and saying; Holy, Holy, Holy, Lord God of Hosts, Heaven and Earth are full of thy Glory: Glory be to thee, O Lord most High. Psal. 8.

A CONFUTATION OF ATHEISM FROM THE *Origin and Frame of the World.*

The Third and Laſt PART.

The *Eighth* SERMON preached *December* 5. 1692.

Acts XIV. 15, *&c.*

That ye ſhould turn from theſe vanities unto the living God, who made Heaven and Earth and the Sea, and all things that are therein: Who in times paſt ſuffer'd all Nations to walk in their own ways. Nevertheleſs, he left not himſelf without witneſs, in that he did good, and gave us Rain from Heaven, and fruitfull Seaſons, filling our hearts with Food and Gladneſs.

HAving abundantly proved in our Laſt Exerciſe, That the Frame of the preſent World could neither be made nor preſerved without the *Power* of God; we ſhall now conſider the ſtructure and

and motions of our own Syſtem, if any characters of Divine *Wiſdom* and *Goodneſs* may be diſcoverable by us. And even at the firſt and general View it very evidently appears to us (which is our FOURTH and Laſt Propoſition,) That the Order and Beauty of the Syſtematical Parts of the World, the Diſcernible Ends and Final Cauſes of them, the τὸ βελτίον or Meliority above what was neceſſary to be, do evince by a reflex Argument, that it could not be produced by Mechaniſm or Chance, but by an Intelligent and Benign Agent, *that by his excellent Wiſdom made the Heavens.*

But before we engage in this Diſquiſition, we muſt offer one neceſſary Caution; that we need not nor do not confine and determin the purpoſes of God in creating all Mundane Bodies, merely to Humane Ends and Uſes. Not that we believe it laborious and painfull to Omnipotence to create a World out of Nothing; or more laborious to create a great World, than a ſmall one: ſo as we might think it diſagreeable to the Majeſty and Tranquillity of the Divine Nature to take ſo much pains for our ſakes. Nor do we count it any abſurdity, that ſuch a vaſt and immenſe Univerſe ſhould be made for the ſole uſe of ſuch mean and unworthy Creatures as the Children of Men. For if we conſider the Dignity of an Intelligent Being, and put that in the

ſcales

ſcales againſt brute inanimate Matter; we may affirm, without over-valuing Humane Nature, that the Soul of one vertuous and religious Man is of greater worth and excellency than the Sun and his Planets and all the Stars in the World. If therefore it could appear, that all the Mundane Bodies are ſome way conducible to the ſervice of Man; if all were as beneficial to us, as the Polar Stars were formerly for Navigation: as the Moon is for the flowing and ebbing of Tides, by which an ineſtimable advantage accrues to the World; for her officious Courteſie in long Winter Nights, eſpecially to the more Northern Nations, who in a continual Night it may be of a whole month are ſo pretty well accommodated by the Light of the Moon reflected from frozen Snow, that they do not much envy their *Antipodes* a month's preſence of the Sun: if all the Heavenly Bodies were thus ſerviceable to us, we ſhould not be backward to aſſign their uſefulneſs to Mankind, as the ſole end of their Creation. But we dare not undertake to ſhew, what advantage is brought to Us by thoſe innumerable Stars in the Galaxy and other parts of the Firmament, not diſcernible by naked eyes, and yet each many thouſand times bigger than the whole body of the Earth: If you ſay, they beget in us a great Idea and Veneration of the mighty Author and Governour

Governour of ſuch ſtupendous Bodies, and excite and elevate our minds to his adoration and praiſe; you ſay very truly and well. But would it not raiſe in us a higher apprehenſion of the infinite Majeſty and boundleſs Beneficence of God, to ſuppoſe that thoſe remote and vaſt Bodies were formed, not merely upon Our account to be peept at through an Optick Glaſs, but for different ends and nobler purpoſes? And yet who will deny, but that there are great multitudes of lucid Stars even beyond the reach of the beſt Teleſcopes; and that every viſible Star may have opake Planets revolve about them, which we cannot diſcover? Now if they were not created for Our ſakes; it is certain and evident, that they were not made for their own. For Matter hath no life nor perception, is not conſcious of its own exiſtence, nor capable of happineſs, nor gives the Sacrifice of Praiſe and Worſhip to the Author of its Being. It remains therefore, that all Bodies were formed for the ſake of Intelligent Minds: and as the Earth was principally deſigned for the Being and Service and Contemplation of Men; why may not all other Planets be created for the like Uſes, each for their own Inhabitants which have Life and Underſtanding? If any man will indulge himſelf in this Speculation, he need not quarrel with revealed Religion upon ſuch an ac-

count. The Holy Scriptures do not forbid him to ſuppoſe as great a Multitude of Syſtems and as much inhabited, as he pleaſes. 'Tis true; there is no mention in *Moſes*'s Narrative of the Creation, of any People in other Planets. But it plainly appears, that the Sacred Hiſtorian doth only treat of the Origins of Terreſtrial Animals: he hath given us no account of God's creating the Angels; and yet the ſame Author, in the enſuing parts of the Pentateuch, makes not unfrequent mention of the *Angels of God*. Neither need we be ſollicitous about the condition of thoſe Planetary People, nor raiſe frivolous Diſputes, how far they may participate in the Miſeries of *Adam*'s Fall, or in the benefits of *Chriſt*'s Incarnation. As if, becauſe they are ſuppoſed to be *Rational*, they muſt needs be concluded to be *Men*? For what is Man? not a *Reaſonable Animal* merely, for that is not an adequate and diſtinguiſhing Definition; but a Rational Mind of ſuch particular Faculties, united to an Organical Body of ſuch a certain Structure and Form, in ſuch peculiar Laws of Connexion between the Operations and Affections of the Mind and the Motions of the Body. Now God Almighty by the inexhauſted fecundity of his creative Power may have made innumerable Orders and Claſſes of Rational Minds; ſome in their natural perfections higher than Humane Souls, others inferior.

inferior. But a Mind of ſuperior or meaner capacities than Humane would conſtitute a different Species, though united to a Humane Body in the ſame Laws of Connexion: and a Mind of Humane Capacities would make another Species, if united to a different Body in different Laws of Connexion. For this Sympathetical Union of a Rational Soul with Matter, ſo as to produce a Vital communication between them, is an arbitrary inſtitution of the Divine Wiſdom: there is no reaſon nor foundation in the ſeparate natures of either ſubſtance, why any Motion in the Body ſhould produce any Senſation at all in the Soul; or why This motion ſhould produce That particular Senſation, rather than any other. God therefore may have join'd Immaterial Souls, even of the ſame Claſs and Capacities in their ſeparate State, to other kinds of Bodies and in other Laws of Union; and from thoſe different Laws of Union there will ariſe quite different affections and natures and ſpecies of the compound Beings. So that we ought not upon any account to conclude, that if there be Rational Inhabitants in the *Moon* or *Mars* or any unknown Planets of other Syſtems, they muſt therefore have Humane Nature, or be involved in the Circumſtances of Our World. And thus much was neceſſary to be here inculcated (which will obviate and preclude

the moſt conſiderable objections of our Adverſaries) that we do not determine the Final Cauſes and Uſefulneſs of the Syſtematical parts of the World, merely as they have reſpect to the Exigencies or Conveniencies of Humane Life.

Let us now turn our thoughts and imaginations to the Frame of our Syſtem, if there we may trace any viſible footſteps of Divine Wiſdom and Beneficence. But we are all liable to many miſtakes by the prejudices of Childhood and Youth, which few of us ever correct by a ſerious ſcrutiny in our riper years, and a Contemplation of the *Phænomena* of Nature in their Cauſes and Beginnings. What we have always ſeen to be done in one conſtant and uniform manner; we are apt to imagin there was but that one way of doing it, and it could not be otherwiſe. This is a great error and impediment in a diſquiſition of this nature: to remedy which, we ought to conſider every thing as not yet in Being; and then diligently examin, if it muſt needs have been at all, or what other ways it might have been as poſſibly as the preſent; and if we find a greater Good and Utility in the preſent conſtitution, than would have accrued either from the total Privation of it, or from other frames and ſtructures that might as poſſibly have been as It: we may then reaſonably conclude, that the preſent conſtitution

ſtitution proceeded, neither from the neceſſity of material Cauſes, nor the blind ſhuffles of an imaginary Chance, but from an intelligent and Good Being, that formed it that particular way out of choice and deſign. And eſpecially if this Uſefulneſs be conſpicuous not in one or a few inſtances only, but in a long train and ſeries of Things, this will give us a firm and infallible aſſurance, that we have not paſs'd a wrong Judgment.

I. Let us proceed therefore by this excellent Rule in the contemplation of Our Syſtem. 'Tis evident that all the Planets receive Heat and Light from the body of the Sun. Our own Earth in particular would be barren and deſolate, a dead dark lump of Clay, without the benign influence of the Solar Rayes; which without queſtion is true of all the other Planets. It is *good* therefore, that there ſhould be a Sun, to warm and cheriſh the Seeds of Plants, and excite them to Vegetation; to impart an uninterrupted Light to all parts of his Syſtem for the Subſiſtence of Animals. But how came the Sun to be Luminous? not from the neceſſity of natural Cauſes, or the conſtitution of the Heavens. All the Planets might have moved about him in the ſame Orbs and the ſame degrees of Velocity as now; and yet the Sun might have been an opake and cold

cold Body like Them. For as the ſix Primary Planets revolve about Him, ſo the Secondary ones are moved about Them, the Moon about the Earth, the Satellites about *Jupiter*, and others about *Saturn*; the one as regularly as the other, in the ſame Seſquialteral proportion of the times of their Periodical Revolutions to the Semidiameters of their Orbs. So that, though we ſuppoſe the preſent Exiſtence and Conſervation of the Syſtem, yet the Sun might have been a Body without Light or Heat, of the ſame kind with the Earth and *Jupiter* and *Saturn*. But then what horrid darkneſs and deſolation muſt have reign'd in the World? It had been unfit for the Divine purpoſes in creating vegetable and ſenſitive and rational Creatures. It was therefore the contrivance and choice of a *Wiſe and Good* Being; that the Central Sun ſhould be a Lucid Body, to communicate warmth and light and life to the Planets around him.

II. We have ſhewed in our Laſt, that the concentric Revolutions of the Planets about the Sun proceed from a compound Motion; a Gravitation toward the Sun, which is a conſtant Energy infuſed into Matter by the Author of all things, and a projected tranſverſe Impulſe in Tangents to their ſeveral Orbs, that was impreſs'd at firſt by the Divine Arm, and will carry them around till the end of the World.

World. But now admitting that Gravity may be eſſential to Matter; and that a tranſverſe Impulſe might be acquired too by Natural Cauſes, yet to make all the Planets move about the Sun in circular Orbs; there muſt be given to each a determinate Impulſe, theſe preſent particular degrees of Velocity which they now have, in proportion to their Diſtances from the Sun and to the quantity of the Solar Matter. For had the Velocities of the ſeveral Planets been greater or leſs than they are now, at the ſame diſtances from the Sun; or had their Diſtances from the Sun, or the quantity of the Sun's Matter and conſequently his Attractive Power been greater or leſs than they are now, with the ſame Velocities: they would not have revolved in concentric Circles as they do, but have moved in Hyperbola's or Parabola's or in Ellipſes very Eccentric. The ſame may be ſaid of the Velocities of the Secondary Planets with reſpect to their Diſtances from the Centers of Their Orbs, and to the Quantities of the Matter of thoſe Central Bodies. Now that all theſe Diſtances and Motions and Quantities of Matter ſhould be ſo accurately and harmoniouſly adjuſted in this great Variety of our Syſtem, is above the fortuitous Hits of blind material Cauſes, and muſt certainly flow from that eternal Fountain of Wiſdom, the Creator of Heaven and Earth,

Newton Phil. Natur. Princip. Math.

Ὁ θεὸς ἀεὶ γεωμετρεῖ. Plat.

Earth, who *always acts Geometrically*, by juſt and adequate numbers and weights and meaſures. And let us examin it further by our Critical Rule: Are the preſent Revolutions in circular Orbs more beneficial, than the other would be? If the Planets had moved in thoſe Lines above named; ſometimes they would have approached to the Sun as near as the Orb of *Mercury*, and ſometimes have exorbitated beyond the diſtance of *Saturn*: and ſome have quite left the Sun without ever returning. Now the very conſtitution of a Planet would be corrupted and deſtroyed by ſuch a change of the Interval between it and the Sun: no living thing could have endured ſuch unſpeakable exceſſes of Heat and Cold: all the Animals of our Earth muſt inevitably have periſhed, or rather never have been. So that as ſure as it is *good*, *very good*, that Humane Nature ſhould exiſt; ſo certain it is that the circular Revolutions of the Earth (and Planets) rather than thoſe other Motions which might as poſſibly have been, do declare not only the Power of God, but his *Wiſdom and Goodneſs*.

Gen. 1.

III. It is manifeſt by our laſt Diſcourſe, that the Æthereal Spaces are perfectly fluid; they neither aſſiſt nor retard, neither guide nor divert the Revolutions of the Planets; which rowl through thoſe Regions as free and unreſiſted, as if they moved in

in a *vacuum*. So that any of them might as poſſibly have moved in oppoſite Courſes to the preſent, and in Planes croſſing the Plane of the Ecliptick in any kind of Angles. Now if the Syſtem had been fortuitouſly formed by the convening Matter of a Chaos; how is it conceivable, that all the Planets both Primary and Secondary, ſhould revolve the ſame Way from the Weſt to the Eaſt, and that in the ſame Plane too without any conſiderable variation? No natural and neceſſary Cauſe could ſo determin their motions; and 'tis millions of millions odds to an unit in ſuch a Caſt of a Chance. Such an apt and regular Harmony, ſuch an admirable Order and Beauty muſt deſervedly be aſcribed to Divine Art and Conduct. Eſpecially if we conſider, that the ſmalleſt Planets are ſituated neareſt the Sun and each other; whereas *Jupiter* and *Saturn*, that are vaſtly greater than the reſt and have many Satellites about them, are wiſely removed to the extreme Regions of the Syſtem, and placed at an immenſe Diſtance one from the other. For even now at this wide interval they are obſerved in their Conjunctions to diſturb one anothers motions a little by their gravitating Powers: but if ſuch vaſt Maſſes of Matter had been ſituated much nearer to the Sun or to each other (as they might as eaſily have been, for any mechanical or fortuitous Agent) they muſt

neceſſarily have cauſed a conſiderable diſturbance and diſorder in the whole Syſtem.

IV. But let us conſider the particular Situation of our Earth and its diſtance from the Sun. It is now placed ſo conveniently, that Plants thrive and flouriſh in it, and Animals live: this is matter of fact, and beyond all diſpute. But how came it to paſs at the beginning, that the Earth moved in its preſent Orb? We have ſhown before, that if Gravity and a Projected Motion be fitly proportion'd, any Planet would freely revolve at any aſſignable diſtance within the Space of the whole Syſtem. Was it mere Chance then, or Divine Counſel and Choice, that conſtituted the Earth in its preſent Situation? To know this; we will enquire, if this particular Diſtance from the Sun be better for our Earth and its Creatures, than a greater or leſs would have been. We may be mathematically certain, That the Heat of the Sun is according to the denſity of the Sun beams, and is reciprocally proportional to the ſquare of the diſtance from the Body of the Sun. Now by this Calculation, ſuppoſe the Earth ſhould be removed and placed nearer to the Sun, and revolve for inſtance in the Orbit of *Mercury*; there the whole Ocean would even boil with extremity of Heat, and be all exhaled into Vapors; all Plants and Animals would be ſcorched and conſumed

Newton ibidem, p. 415.

ſumed in that fiery Furnace. But ſuppoſe the Earth ſhould be carried to the great Diſtance of *Saturn*; there the whole Globe would be one *Frigid Zone*, the deepeſt Seas under the very Equator would be frozen to the bottom; there would be no Life, no Germination; nor any thing that comes now under our knowledge or ſenſes. It was much better therefore, that the Earth ſhould move where it does, than in a much greater or leſs Interval from the Body of the Sun. And if you place it at any other Diſtance, either leſs or more than *Saturn* or *Mercury*; you will ſtill alter it for the worſe proportionally to the Change. It was ſituated therefore where it is, by the Wiſdom of ſome voluntary Agent; and not by the blind motions of Fortune or Fate. If any one ſhall think with himſelf, How then can any Animal at all live in *Mercury* and *Saturn* in ſuch intenſe degrees of Heat and Cold? Let him only conſider, that the Matter of each Planet may have a different denſity and texture and form, which will diſpoſe and qualifie it to be acted on by greater or leſs degrees of Heat according to their ſeveral Situations; and that the Laws of Vegetation and Life and Suſtenance and Propagation are the arbitrary pleaſure of God, and may vary in all Planets according to the Divine Appointment and the Exigencies of Things, in manners incomprehenſible to our

Imaginations. 'Tis enough for our purpose to discern the tokens of Wisdom in the placing of our Earth; if its present constitution would be spoil'd and destroy'd, if we could not wear Flesh and Blood, if we could not have Humane Nature at those different Distances.

V. We have all learnt from the Doctrine of the Sphere, that the Earth revolves with a double motion. For while it is carried around the Sun in the *Orbis Magnus* once a year, it perpetually wheels about its own Axis once in a day and a night: so that in 24 hours space it hath turn'd all the parts of the Equinoctial to the rayes of the Sun. Now the uses of this vertiginous motion are very conspicuous; for this is it that gives Day and Night successively over the face of the whole Earth, and makes it habitable all around: without this Diurnal Rotation one Hemisphere would lie dead and torpid in perpetual Darkness and Frost, and the best part of the other would be burnt up and depopulated by so permanent a Heat. It is better therefore, that the Earth should often move about its own Center, and make these useful Vicissitudes of Night and Day, than expose always the same side to the action of the Sun. But how came it to be so moved? not from any necessity of the Laws of Motion or the System of the Heavens. It might annually have compassed

compaſſed the Sun, and yet have always turn'd the ſame Hemiſphere towards it. This is matter of Fact and Experiment in the motion of the Moon; which is carried about the Earth, in the very ſame manner as the Earth about the Sun, and yet always ſhews the ſame face to Us. She indeed, notwithſtanding this, turns all her Globe to the Sun by moving in her menſtrual Orb, and enjoys Night and Day alternately, one Day of Hers being equal to about 14 Days and Nights of Ours. But ſhould the Earth move in the ſame manner about the Sun, as the Mood does about the Earth; one half of it could never ſee the Day, but muſt eternally be condemned to Solitude and Darkneſs. That the Earth therefore frequently revolves about its own Center, is another eminent token of the Divine Wiſdom and Goodneſs.

VI. But let us compare the mutual proportion of theſe Diurnal and Annual Revolutions; for they are diſtinct from one another, and have a different degree of Velocity. The Earth rowls once about its Axis in a natural Day: in which time all the parts of the Equator move ſomething more than 3 of the Earths Diameters; which makes about 1100 in the ſpace of a year. But within the ſame ſpace of a year the Center of the Earth is carried above 590 times as far once round the *Orbis Magnus*, whoſe wideneſs

wideneſs we now aſſume to be 20000 Terreſtrial Diameters. So that the annual motion is more than 50 times ſwifter than the Diurnal Rotation, though we meaſure the latter from the Equator, where the Celerity is the greateſt. But it muſt needs be acknowledged, ſince the Earth revolves not upon a material and rugged, but a geometrical Plane, that the proportions of the Diurnal and Annual Motions may be varied in innumerable degrees; any of which might have happen'd as probably as the preſent. What was it then that preſcribed this particular Celerity to each Motion, this proportion and temperament between them both? Let us examin it by our former Rule: if there be any *Meliority* in the preſent conſtitution; if any conſiderable Change would be for the worſe. We will ſuppoſe then, that the *Annual* Motion is accelerated doubly; ſo that a periodical Revolution would be performed in 6 Months. Such a Change would be pernicious; not only becauſe the Earth could not move in a Circular Orb, which we have conſider'd before; but becauſe the Seaſons being then twice as ſhort as they are now, the cold Winter would overtake us, before our Corn and Fruits could poſſibly be ripe. But ſhall this Motion be as much retarded, and the Seaſons longthen'd in the ſame proportion? This too would be as fatal as the other:

Tacquet de Circulorum volutionibus.

other: for in moſt Countries the Earth would be ſo parched and effete by the drought of the Summer, that it would afford ſtill but one Harveſt, as it doth at the preſent: which then would not be a ſufficient ſtore for the conſumption of a Year, that would be twice as long, as now. But let us ſuppoſe, that the *Diurnal* Rotation is either conſiderably ſwifter or ſlower. And firſt let it be retarded; ſo as to make (for example) but 12 Circuits in a year: then every day and night would be as long as Thirty are now, not ſo fitly proportion'd neither to the common affairs of Life, nor to the exigencies of Sleep and Suſtenance in a conſtitution of Fleſh and Blood. But let it then be accelerated; and wheel a thouſand times about its Center, while the Center deſcribes one circle about the Sun: then an Equinoctial day would conſiſt but of four Hours, which would be an inconvenient Change to the inhabitants of the Earth; ſuch haſty Nights as thoſe would give very unwelcome interruptions to our Labours and Journeys and other Tranſactions of the World. It is *better* therefore, that the Diurnal and Annual Motions ſhould be ſo proportion'd as they are. Let it therefore be aſcribed to the tranſcendent Wiſdom and Benignity of that God, *who hath made all things very good, and loveth all things that he hath made.*

VII. But

VII. But let us conſider, not the Quantity and Proportion only, but the Mode alſo of this Diurnal Motion. You muſt conceive an imaginary Plane, which paſſing through the Centers of the Sun and the Earth extends it ſelf on all ſides as far as the Firmament: this Plane is called the Ecliptick; and in this the Center of the Earth is perpetually carried without any deviation. But then the Axis of the Earth, about which its Diurnal Rotation is made, is not erect to this Plane of the Ecliptick, but inclines toward it from the Perpendiculum in an Angle of 23 degrees and a half. Now why is the Axis of the Earth in this particular poſture, rather than any other? did it happen by Chance, or proceed from Deſign? To determin this queſtion, let us ſee, as we have done before, if This be more beneficial to us, than any other Conſtitution. We all know from the very Elements of Aſtronomy, that this inclined Poſition of the Axis, which keeps always the ſame Direction and a conſtant Paralleliſm to it ſelf, is the ſole cauſe of theſe gratefull and needfull Viciſſitudes of the four Seaſons of the Year, and the Variation in length of Days. If we take away the *Inclination*; it would abſolutely undo theſe Northern Nations; the Sun would never come nearer us, than he doth now on the tenth of *March* or the twelfth of *September*. But would

would we rather part with the *Parallelism*? Let us ſuppoſe then that the Axis of the Earth keeps always the ſame Inclination toward the body of the Sun: this indeed would cauſe a variety of Days and Nights and Seaſons on the Earth; but then every particular Country would have always the ſame diverſity of Day and Night, and the ſame conſtitution of Seaſon, without any alteration: ſome would always have long Nights and ſhort Days, others again perpetually long Days and ſhort Nights: one Climate would be ſcorched and ſwelter'd with everlaſting Dog-days; while an eternal *December* blaſted another. This ſurely is not quite ſo good as the preſent Order of Seaſons. But ſhall the Axis rather obſerve no conſtant inclination to any thing, but vary and waver at uncertain times and places? This would be a happy Conſtitution indeed. There could be no health, no life nor ſubſiſtence in ſuch an irregular Syſtem; by thoſe ſurprizing Nods of the Pole we might be toſſed backward or forward in a moment from *January* to *June*, nay poſſibly from the *January* of *Greenland* to the *June* of *Abeſſinia*. It is *better* therefore upon all accounts that the Axis ſhould be continued in its preſent poſture and direction: ſo that this alſo is a ſignal Character of Divine Wiſdom and Goodneſs.

But becauſe ſeveral have imagin'd, that this skue poſture of the Axis is a moſt unfortunate and pernicious thing; that if the Poles had been erect to the Plane of the Ecliptic, all mankind would have enjoyed a very Paradiſe upon Earth; a perpetual Spring, an eternal Calm and Serenity, and the Longævity of *Methuſelah* without pains or diſeaſes; we are obliged to conſider it a little further. And firſt as to the *Univerſal and Perpetual Spring*, 'tis a mere Poetical Fancy, and (bating the equality of Days and Nights which is a thing of ſmall value) as to the other properties of a Spring, it is naturally impoſſible, being repugnant to the very form of the Globe. For to thoſe People that dwell under or near the Æquator, this Spring would be a moſt peſtilent and inſupportable Summer; and as for thoſe Countries that are nearer the Poles, in which number are our own and the moſt conſiderable Nations of the World, a Perpetual Spring will not do their buſineſs; they muſt have longer Days, a nearer approach of the Sun, and a leſs Obliquity of his Rayes; they muſt have a Summer and a Harveſt-time too to ripen their Grain and Fruits and Vines, or elſe they muſt bid an eternal adieu to the very beſt of their ſuſtenance. It is plain, that the Center of the Earth muſt move all along in the *Orbis Magnus*; whether we ſuppoſe a Perpetual Æquinox, or an

an oblique Poſition of the Axis. So that the whole Globe would continue in the ſame Diſtance from the Sun, and receive the ſame quantity of Heat from him in a Year or any aſſignable time, in either Hypotheſis. Though the Axis then had been perpendicular; yet take the whole Year about, and the Earth would have had the ſame meaſure of Heat, that it has now. So that here lies the queſtion; Whether is more beneficial, that the Inhabitants of the Earth ſhould have the Yearly quantity of Heat diſtributed equally every day, or ſo diſpoſed as it is, a greater ſhare of it in Summer and in Winter a leſs? It muſt needs be allowed, that the Temperate Zones have no Heat to ſpare in Summer; 'tis very well if it be ſufficient for the maturation of Fruits. Now this being granted; 'tis as certain and manifeſt, that an even diſtribution of the Yearly Heat would never have brought thoſe Fruits to maturity, as this is a known and familiar experiment, That ſuch a quantity of Fewel all kindled at once will cauſe Water to boil, which being lighted gradually and ſucceſſively will never be able to do it. It is clear therefore, that in the conſtitution of a Perpetual Æquinox the beſt part of the Globe would be deſolate and uſeleſs: and as to that little that could be inhabited, there is no reaſon to expect, that it would conſtantly enjoy that admired

Calm and Serenity. If the aſſertion were true; yet ſome perhaps may think, that ſuch a Felicity, as would make Navigation impoſſible, is not much to be envied. But it's altogether precarious, and has no neceſſary foundation neither upon Reaſon nor Experience. For the Winds and Rains and other affections of the Atmoſphere do not ſolely depend (as that aſſertion ſuppoſeth) upon the courſe of the Sun; but partly and perhaps moſt frequently upon Steams and Exhalations from ſubterraneous Heat, upon the Poſitions of the Moon, the Situations of Seas or Mountains or Lakes or Woods, and many other unknown or uncertain Cauſes. So that, though the Courſe of the Sun ſhould be invariable, and never ſwerve from the Equator; yet the temperament of the Air would be mutable nevertheleſs, according to the abſence or preſence or various mixture of the other Cauſes. The ancient Philoſophers for many ages together unanimouſly taught, that the Torrid Zone was not habitable. The reaſons that they went upon were very ſpecious and probable; till the experience of theſe latter ages evinced them to be erroneous. They argued from cœleſtial Cauſes only, the conſtant Vicinity of the Sun and the directneſs of his Rayes; never ſuſpecting, that the Body of the Earth had ſo great an efficiency in the changes of the Air; and that then could

could be the coldeſt and rainieſt ſeaſon, the Winter of the Year, when the Sun was the neareſt of all, and ſteer'd directly over mens heads. Which is warning ſufficient to deterr any man from expecting ſuch eternal Serenity and Halcyon-days from ſo incompetent and partial a Cauſe, as the conſtant Courſe of the Sun in the Æquinoctial Circle. What general condition and temperament of Air would follow upon that Suppoſition we cannot poſſibly define; for 'tis not cauſed by certain and regular Motions, nor ſubject to Mathematical Calculations. But if we may make a conjecture from the preſent Conſtitution; we ſhall hardly wiſh for a Perpetual Æquinox to ſave the charges of Weather-glaſſes: for 'tis very well known, that the Months of *March* and *September*, the two Æquinoxes of Our year, are the moſt windy and tempeſtuous, the moſt unſettled and unequable of Seaſons in moſt Countries of the World. Now if this notion of an uniform Calm and Serenity be falſe or precarious; then even the laſt ſuppoſed advantage, the *conſtant Health and Longævity* of Men muſt be given up alſo, as a groundleſs conceit: for this (according to the Aſſertors themſelves) doth ſolely, as an effect of Nature, depend upon the other. Nay further, though we ſhould allow them their Perpetual Calm and Æquability of Heat; they will never be able to prove, that

that therefore Men would be ſo vivacious as they would have us believe. Nay perhaps the contrary may be inferr'd, if we may argue from preſent experience: For the Inhabitants of the Torrid Zone, who ſuffer the leaſt and ſhorteſt receſſes of the Sun, and are within one ſtep and degree of a Perpetual Æquinox, are not only ſhorter lived (generally ſpeaking) than other Nations nearer the Poles; but inferior to them in Strength and Stature and Courage, and in all the capacities of the Mind. It appears therefore, that the gradual Viciſſitudes of Heat and Cold are ſo far from ſhortning the thread of man's Life, or impairing his intellectual Faculties; that very probably they both prolong the one in ſome meaſure, and exalt and advance the other. So that ſtill we do profeſs to adore the Divine Wiſdom and Goodneſs for this variety of Seaſons, for Gen. 8. *Seed-time and harveſt, and cold and heat, and ſummer and winter.*

VIII. Come we now to conſider the Atmoſphere, and the exterior Frame and Face of the Globe; if we may find any tracks and footſteps of Wiſdom in the Conſtitution of Them. I need not now inform you, that the Air is a thin fluid Body, endued with Elaſticity or Springineſs, and capable of Condenſation and Rarefaction; and ſhould it be much more expanded or condenſed, than it natural-

See Mr. *Boyle* of the Air.

ly

ly is, no Animals could live and breath: it is probable alſo, that the Vapours could not be duly raiſed and ſupported in it; which at once would deprive the Earth of all its ornament and glory, of all its living Inhabitants and Vegetables too. But 'tis certainly known and demonſtrated, that the Condenſation and Expanſion of any portion of the Air, is always proportional to the weight and preſſure incumbent upon it: ſo that if the Atmoſphere had been either much greater or leſs than it is, as it might eaſily have been, it would have had in its loweſt region on the Surface of the Earth a much greater denſity or tenuity of texture; and conſequently have been unſerviceable for Vegetation and Life. It muſt needs therefore be an Intelligent Being that could ſo juſtly adapt it to thoſe excellent purpoſes. 'Tis concluded by Aſtronomers, that the Atmoſphere of the Moon hath no Clouds nor Rains, but a perpetual and uniform ſerenity: becauſe nothing diſcoverable in the Lunar Surface is ever covered and abſconded from us by the interpoſition of any clouds or miſts, but ſuch as riſe from our own Globe. Now if the Atmoſphere of Our Earth had been of ſuch a Conſtitution; there could nothing, that now grows or breaths in it, have been formed or preſerved; Humane Nature muſt have been quite obliterated out of the Works of Creation. If our Air had not been

been a ſpringy elaſtical Body, no Animal could have exerciſed the very function of Reſpiration: and yet the ends and uſes of Reſpiration are not ſerved by that Springineſs, but by ſome other unknown and ſingular Quality. For the Air, that in exhauſted Receivers of Air-pumps is exhaled from Minerals and Fleſh and Fruits and Liquors, is as true and genuine as to Elaſticity and Denſity or Rarefaction, as that we reſpire in: and yet this factitious Air is ſo far from being fit to be breathed in, that it kills Animals in a moment, even ſooner than the very abſence of all Air, than a Vacuum it ſelf. All which do inferr the moſt admirable Providence of the Author of Nature; who foreknew the neceſſity of Rains and Dews to the preſent ſtructure of Plants, and the uſes of Reſpiration to Animals; and therefore created thoſe correſpondent properties in the Atmoſphere of the Earth.

Mr. *Boyle's* Second Continuation of Phyſico-mechanical Exp. about the Air.

IX. In the next place let us conſider the ample proviſion of Waters, thoſe inexhauſted Treaſures of the Ocean: and though ſome have grudged the great ſhare that it takes of the Surface of the Earth, yet we ſhall propoſe this too, as a conſpicuous mark and character of the Wiſdom of God. For that we may not now ſay, that the vaſt *Atlantick* Ocean is really greater Riches and of more worth to the World, than if it was changed into a fifth Continent;

Lucret. Et mare, quod late terrarum diſtinet oras.

Continent; and that the Dry Land is as yet much too big for its Inhabitants; and that before they ſhall want Room by increaſing and multiplying, there may be *new Heavens and a new Earth*: We dare venture to affirm, that theſe copious Stores of Waters are no more than neceſſary for the preſent conſtitution of our Globe. For is not the whole Subſtance of all Vegetables mere modified Water? and conſequently of all Animals too; all which either feed upon Vegetables or prey upon one another? Is not an immenſe quantity of it continually exhaled by the Sun, to fill the Atmoſphere with Vapors and Clouds, and feed the Plants of the Earth with the balm of Dews and the fatneſs of Showrs? It ſeems incredible at firſt hearing, that all the Blood in our Bodies ſhould circulate in a trice, in a very few minutes: but I believe it would be more ſurprizing, if we knew the ſhort and ſwift periods of the great Circulation of Water, that vital Blood of the Earth, which compoſeth and nouriſheth all things. If we could but compute that prodigious Maſs of it, that is daily thrown into the channel of the Sea from all the Rivers of the World: we ſhould then know and admire how much is perpetually evaporated and caſt again upon the Continents to ſupply thoſe innumerable Streams. And indeed hence we may diſcover, not only the *Uſe* and *Neceſſity*, but the

Cauſe too of the vaſtneſs of the Ocean. I never yet heard of any Nation, that complained they had too broad or too deep or too many Rivers, or wiſhed they were either ſmaller or fewer: they underſtand better than ſo, how to value and eſteem thoſe ineſtimable gifts of Nature. Now ſuppoſing that the multitude and largeneſs of Rivers ought to continue as great as now; we can eaſily prove, that the extent of the Ocean could be no leſs than it is. For it's evident and neceſſary, (if we follow the moſt fair and probable Hypotheſis, that the Origin of Fountains is from Vapors and Rain) that the Receptacle of Waters, into which the mouths of all thoſe Rivers muſt empty themſelves, ought to have ſo ſpacious a Surface, that as much Water may be continually bruſhed off by the Winds and exhaled by the Sun, as (beſides what falls again in Showers upon its own Surface) is brought into it by all the Rivers. Now the Surface of the Ocean is juſt ſo wide and no wider: for if more was evaporated than returns into it again, the Sea would become leſs; if leſs was evaporated, it would grow bigger. So that, becauſe ſince the memory of all ages it hath continu'd at a ſtand without conſiderable variation, and if it hath gain'd ground upon one Country, hath loſt as much in another; it muſt conſequently be exactly proportioned to the preſent conſtitution

conſtitution of Rivers. How raſh therefore and vain are thoſe buſie Projectors in Speculation, that imagin they could recover to the World many new and noble Countries, in the moſt happy and temporate Climates, without any damage to the old ones, could this ſame Maſs of the Ocean be lodged and circumſcribed in a much deeper Channel and and within narrower Shores! For by how much they would diminiſh the preſent extent of the Sea, ſo much they would impair the Fertility and Fountains and Rivers of the Earth: becauſe the quantity of Vapors, that muſt be exhaled to ſupply all theſe, would be leſſened proportionally to the bounds of the Ocean; for the Vapors are not to be meaſured from the bulk of the Water, but from the ſpace of the Surface. So that this alſo doth inferr the ſuperlative Wiſdom and Goodneſs of God, that he hath treaſured up the Waters in ſo deep and ſpacious a Storehouſe, *the place that he hath founded and appointed for them.* Pſal. 104.

X. But ſome men are out of Love with the features and mean of our Earth; they do not like this rugged and irregular Surface, theſe Precipices and Valleys and the gaping Channel of the Ocean. This with them is Deformity, and rather carries

Nequaquam nobis divinitus eſſe creatam
Naturam rerum, tanta ſtat prædita culpa.
Principio, quantum cæli tegit impetus ingens,
Inde avidam partem montes Sylvaq; ferarum
Poſſedere, tenent rupes, vaſtaque paludes,
Et mare, quod late terrarum diſſinit oras.
Lucret. *lib.* 5.

the face of a Ruin or a rude and indigeſted Lump of Atoms that caſually convened ſo, than a Work of Divine Artifice. They would have the vaſt Body of a Planet to be as elegant and round as a factitious Globe repreſents it; to be every where ſmooth and equable, and as plain as the *Elyſian Fields*. Let us examin, what weighty reaſons they have to diſparage the preſent conſtitution of Nature in ſo injurious a manner. Why, if we ſuppoſe the Ocean to be dry, and that we look down upon the empty Channel from ſome higher Region of the Air, how horrid and ghaſtly and unnatural would it look? Now admitting this Suppoſition; Let us ſuppoſe too that the Soil of this dry Channel were covered with Graſs and Trees in manner of the Continent, and then ſee what would follow. If a man could be carried aſleep and placed in the very middle of this dry Ocean; it muſt be allowed, that he could not diſtinguiſh it from the inhabited Earth. For if the bottom ſhould be unequal with Shelves and Rocks and Precipices and Gulfs; theſe being now apparel'd with a veſture of Plants, would only reſemble the Mountains and Valleys that he was accuſtomed to before. But very probably he would wake in a large and ſmooth Plain: for though the bottom of the Sea were gradually inclin'd and ſloping from the Shore to the middle:

yet

yet the additional Acclivity, above what a Level would ſeem to have, would be imperceptible in ſo ſhort a proſpect as he could take of it. So that to make this Man ſenſible what a deep Cavity he was placed in; he muſt be carried ſo high in the Air, till he could ſee at one view the whole Breadth of the Channel, and ſo compare the depreſſion of the Middle with the elevation of the Banks. But then a very ſmall skill in Mathematicks is enough to inſtruct us, that before he could arrive to that diſtance from the Earth, all the inequality of Surface would be loſt to his View: the wide Ocean would appear to him like an even and uniform Plane (uniform as to its Level, though not as to Light and Shade) though every Rock of the Sea was as high as the *Pico* of *Teneriff*. But though we ſhould grant, that the dry Gulf of the Ocean would appear vaſtly hollow and horrible from the top of a high Cloud: yet what a way of reaſoning is this from the freaks of Imagination, and impoſſible Suppoſitions? Is the Sea ever likely to be evaporated by the Sun, or to be emptied with Buckets? Why then muſt we fancy this impoſſible dryneſs; and then upon that fictitious account calumniate Nature, as deformed and ruinous and unworthy of a Divine Author? Is there then any phyſical deformity in the Fabrick of a Humane Body; becauſe

cauſe our Imagination can ſtrip it of its Muſcles and Skin, and ſhew us the ſcragged and knotty Backbone, the gaping and ghaſtly Jaws, and all the Sceleton underneath? We have ſhewed before, that the Sea could not be much narrower than it is, without a great loſs to the World: and muſt we now have an Ocean of mere Flats and Shallows, to the utter ruin of Navigation; for fear our heads ſhould turn giddy at the imagination of gaping Abyſſes and unfathomable Gulfs? But however, they may ſay, the Sea-ſhores at leaſt might have been even and uniform, not crooked and broken as they are into innumerable Angles and Creeks and In-lets and Bays, without Beauty or Order, which carry the Marks more of Chance and Confuſion, than of the production of a wiſe Creator. And would not this be a fine bargain indeed? to part with all our Commodious Ports and Harbours, which the greater the In-let is, are ſo much the better, for the imaginary pleaſure of an open and ſtreight Shore without any retreat or ſhelter from the Winds; which would make the Sea of no uſe at all as to Navigation and Commerce. But what apology can we make for the horrid deformity of Rocks and Crags, of naked and broken Cliffs, of long Ridges of barren Mountains, in the conveni-enteſt Latitudes for Habitation and Fertility, could

but

but thoſe rude heaps of Rubbiſh and Ruins be removed out of the way? We have one general and ſufficient anſwer for all ſeeming defects or diſorders in the conſtitution of Land or Sea; that we do not contend to have the Earth paſs for a Paradiſe, or to make a very Heaven of our Globe, we reckon it only as the Land of our *peregrination*, and aſpire after *a better, and a cœleſtial Country.* 'Tis enough, Heb. 11.
if it be ſo framed and conſtituted, that by a carefull Contemplation of it we have great reaſon to acknowledge and adore the Divine Wiſdom and Benignity of its Author. But to wave this general Reply; let the Objectors conſider, that theſe ſuppoſed irregularities muſt neceſſarily come to paſs from the eſtabliſh'd Laws of Mechaniſm and the ordinary courſe of Nature. For ſuppoſing the Exiſtence of Sea and Mountains; if the Banks of that Sea muſt never be jagged and torn by the impetuous aſſaults or the ſilent underminings of Waves; if violent Rains and Tempeſts muſt not waſh down the Earth and Gravel from the tops of ſome of thoſe Mountains, and expoſe their naked Ribbs to the face of the Sun; if the Seeds of ſubterraneous Minerals muſt not ferment, and ſometimes cauſe Earthquakes and furious eruptions of *Volcano's*, and tumble down broken Rocks, and lay them in confuſion: then either all things muſt have been overruled

ruled miraculouſly by the immediate interpoſition of God without any mechanical Affections or ſettled Laws of Nature, or elſe the body of the Earth muſt have been as fixed as Gold, or as hard as Adamant, and wholly unfit for Humane Habitation. So that if it *was good* in the ſight of God, that the preſent Plants and Animals, and Humane Souls united to Fleſh and Blood ſhould be upon this Earth under a ſettled conſtitution of Nature: theſe ſuppoſed Inconveniences, as they were foreſeen and permitted by the Author of that Nature, as neceſſary conſequences of ſuch a conſtitution; ſo they cannot inferr the leaſt imperfection in his Wiſdom and Goodneſs. And to murmure at them is as unreaſonable, as to complain that he hath made us Men and not Angels, that he hath placed us upon this Planet, and not upon ſome other, in this or another Syſtem, which may be thought better than Ours. Let them alſo conſider, that this objected Deformity is in our Imaginations only, and not really in Things themſelves. There is no Univerſal Reaſon (I mean ſuch as is not confined to Humane Fancy, but will reach through the whole Intellectual Univerſe) that a Figure by us called Regular, which hath equal Sides and Angles, is abſolutely more beautifull than any irregular one. All Pulchritude is relative; and all Bodies are truly

Gen. 1.

and

and phyſically beautifull under all poſſible Shapes and Proportions; that are good in their Kind, that are fit for their proper uſes and ends of their Natures. We ought not then to believe, that the Banks of the Ocean are really deformed, becauſe they have not the form of a regular Bulwark; nor that the Mountains are out of ſhape, becauſe they are not exact Pyramids or Cones; nor that the Stars are unskilfully placed, becauſe they are not all ſituated at uniform diſtances. 'Theſe are not Natural Irregularities, but with reſpect to our Fancies only; nor are they incommodious to the true Uſes of Life and the Deſigns of Man's Being on the Earth. And let them further conſider, that theſe Ranges of barren Mountains, by condenſing the Vapors, and producing Rains and Fountains and Rivers, give the very Plains and Valleys themſelves that Fertility they boaſt of: that thoſe Hills and Mountains ſupply Us and the Stock of Nature with a great variety of excellent Plants. If there were no inequalities in the Surface of the Earth, nor in the Seaſons of the Year; we ſhould loſe a conſiderable ſhare of the Vegetable Kingdom: for all Plants will not grow in an uniform Level and the ſame temper of Soil, nor with the ſame degree of Heat. Nay let them laſtly conſider, that to thoſe Hills and Mountains we are obliged for all our Metals, and

with them for all the conveniencies and comforts of Life. To deprive us of Metals is to make us mere Savages; to change our Corn or Rice for the old *Arcadian* Diet, our Houſes and Cities for Dens and Caves, and our Cloathing for Skins of Beaſts: 'tis to bereave us of all Arts and Sciences, of Hiſtory and Letters, nay of Revealed Religion too that ineſtimable favour of Heaven: for without the benefit of Letters, the whole Goſpel would be a mere Tradition and old Cabbala, without certainty, without authority. Who would part with theſe Solid and Subſtantial Bleſſings for the little fantaſtical pleaſantneſs of a ſmooth uniform Convexity and Rotundity of a Globe? And yet the misfortune of it is, that the pleaſant View of their imaginary Globe, as well as the deformed Spectacle of our true one, is founded upon impoſſible Suppoſitions. For that equal Convexity could never be ſeen and enjoyed by any man living. The Inhabitants of ſuch an Earth could have only the ſhort proſpect of a little Circular Plane about three Miles around them; tho' neither Woods nor Hedges nor artificial Banks ſhould intercept it: which little too would appear to have an Acclivity on all ſides from the Spectators; ſo that every man would have the diſpleaſure of fancying himſelf the loweſt, and that he always dwelt and moved in a Bottom. Nay, conſidering that

that in ſuch a conſtitution of the Earth they could have no means nor inſtruments of Mathematical Knowledge; there is great reaſon to believe, that the period of the final Diſſolution might overtake them, ere they would have known or had any Suſpicion that they walked upon a round Ball. Muſt we therefore, to make this Convexity of the Earth diſcernible to the Eye, ſuppoſe a man to be lifted up a great height in the Air, that he may have a very ſpacious Horizon under one View? But then again, becauſe of the diſtance, the convexity and gibbouſneſs would vaniſh away; he would only ſee below him a great circular Flat, as level to his thinking as the face of the Moon. Are there then ſuch raviſhing Charms in a dull unvaried Flat, to make a ſufficient compenſation *for the chief things of the ancient Mountains, and for the precious things of the laſting Hills*? Nay we appeal to the ſentence of Mankind; *If a Land of Hills and Valleys* has not more Pleaſure too and Beauty than an uniform Flat? which Flat if ever it may be ſaid to be very delightfull, is then only, when 'tis viewed from the top of a Hill. What were the *Tempe* of *Theſſaly*, ſo celebrated in ancient ſtory for their unparallelled pleaſantneſs, but a Vale divided with a River and terminated with Hills? Are not all the deſcriptions of Poets embelliſh'd with ſuch Ideas, when they

Deut. 33. 15.

Vide Ælian. var. Hiſt. lib. III.

would repreſent any places of Superlative Delight, any bliſsfull Seats of the Muſes or the Nymphs, any ſacred habitations of Gods or Goddeſſes? They will never admit that a wide Flat can be pleaſant, no not in the very *Elyſian Fields* ★; but thoſe too muſt be diverſified with depreſſed Valleys and ſwelling Aſcents. They cannot imagin † even Paradiſe to be a place of Pleaſure, nor Heaven it ſelf to be ‖ Heaven without them.

★ Virg Æn 6. *At pater Anchiſes penitus convalle virenti.* & ibid. *Hoc ſuperate jugum.* & ib. *Et tumulum cæpit.*

† Flours worthy of Paradiſe, which not nice Art
In Beds and curious Knots, but Nature boon
Pour'd forth profuſe on Hill and Dale and Plain.
Paradiſe Loſt, lib. 4.

‖ For Earth hath this variety from Heaven
Of Pleaſure ſituate in Hill and Dale.
Ibid. lib. 6.

Let this therefore be another Argument of the Divine Wiſdom and Goodneſs, that the Surface of the Earth is not uniformly Convex (as many think it would naturally have been, if mechanically formed by a Chaos) but diſtinguiſhed with Mountains and Valleys, and furrowed from Pole to Pole with the Deep Channel of the Sea; and that becauſe of the τὸ βέλτιον, it is better that it ſhould be ſo.

Give me leave to make one ſhort Inference from what has been ſaid, which ſhall finiſh this preſent Diſcourſe, and with it our Task for the Year. We have clearly diſcovered many Final Cauſes and Characters

Characters of Wiſdom and Contrivance in the Frame of the inanimate World; as well as in the Organical Fabrick of the Bodies of Animals. Now from hence ariſeth a new and invincible Argument, that the preſent Frame of the World hath not exiſted from all Eternity. For ſuch an uſefulneſs of things or a fitneſs of means to Ends, as neither proceeds from the neceſſity of their Beings, nor can happen to them by Chance, doth neceſſarily inferr that there was an Intelligent Being, which was the Author and Contriver of that Uſefulneſs. We Serm. V. have formerly demonſtrated, that the Body of a Man, which conſiſts of an incomprehenſible variety of Parts, all admirably fitted for their peculiar Functions and the Conſervation of the Whole, could no more be formed fortuitouſly; than the *Æneis* of *Virgil*, or any other long Poem with good Senſe and juſt Meaſures, could be compoſed by the Caſual Combinations of Letters. Now to purſue this Compariſon; as it is utterly impoſſible to be believed, that ſuch a Poem may have been eternal, tranſcribed from Copy to Copy without any firſt Author and Original: ſo it is equally incredible and impoſſible, that the Fabrick of Humane Bodies, which hath ſuch excellent and Divine Artifice, and, if I may ſo ſay, ſuch good Senſe and true Syntax and harmonious Meaſures in its Conſtitution, ſhould

ſhould be propagated and tranſcribed from Father to Son without a firſt Parent and Creator of it. An eternal uſefulneſs of Things, an eternal Good Senſe, cannot poſſibly be conceived without an eternal Wiſdom and Underſtanding. But that can be no other than that eternal and omnipotent God;

Prov. 3. *that by Wiſdom hath founded the Earth, and by Underſtanding hath eſtabliſhed the Heavens*: To whom be all Honour and Glory and Praiſe and Adoration from henceforth and for evermore. *AMEN.*

FINIS.

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